ZESCO

ZESCO
Integrated Report
2021

A step towards 10 year rolling Strategy

About this Report

The information in this report has been selected to provide stakeholders with an overview of our strategy, business model, performance and governance practices, as well as our risks and opportunities.

The selection of matters to be covered in this report was determined based on whether the matter could substantially affect our ability to create value. It was informed by inputs from our stakeholders within and outside ZESCO Limited and was further refined through engagement with executive management and the Board of Directors.

Report Approval

The Board acknowledges its responsibility to ensure the integrity of this report and confirm that this integrated annual report addresses all material matters and provides a balanced overview of the Company and its prospects. The Board has therefore approved the 2021 Integrated Report for publication.

Mr Vickson Ncube Chairman	**Eng. Victor B Mapani** Managing Director	**Mr. Emmanuel M Banda** Finance Director	**Mr. McRobby V. Chiwale** Company Secretary

Integrated Reporting Team

Mr. McRobby V. Chiwale
Company Secretary

Mr Brown Zimba
Snr Manager Accounting Services

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Manager - Financial Reporting and Analysis

Fitzpatrick Kapepe
Chief Financial Analyst

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Lydia Lubono Mwape
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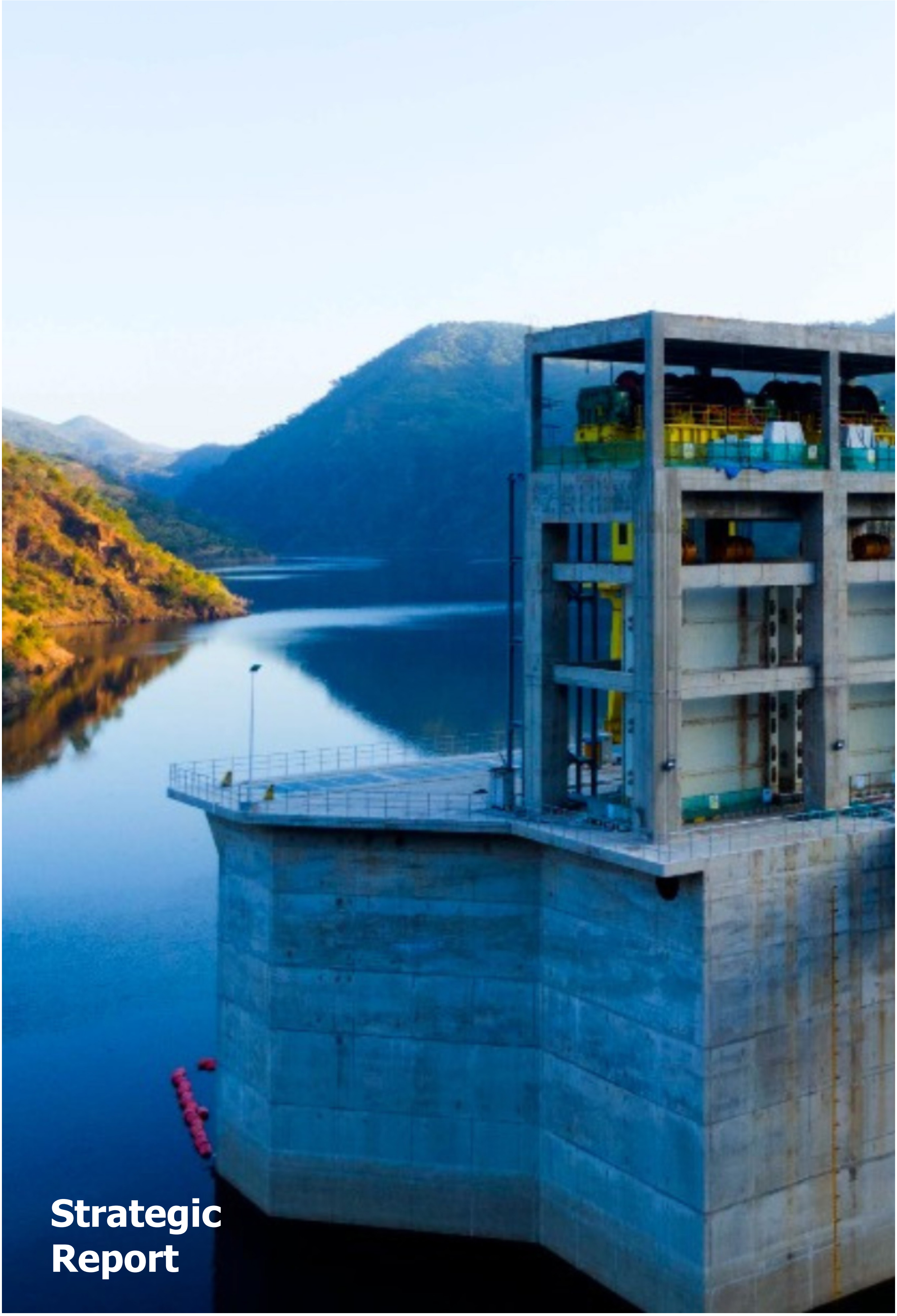


Strategic Report

Group Highlights

2021 Group Highlights

			2020
Group Revenue	K22.0 bn	19% ▲	K18.5 bn
Net Profit Margin	47%	-155% ▲	-86%
Operating Profit/ Loss	K11.7 bn	-173% ▲	-K15.9 bn
Return on Capital Employed	11.4%	-169% ▲	-16.4%
Net Assets	K13.7 bn	321% ▲	K3.3 bn
Interest Cover	12x	-160% ▲	-20.01x
Current Ratio	0.25x	-18% ▼	0.31x
Debt Level	K13.1 bn	-25% ▼	K46.7 bn
Gearing	72%	-23% ▼	93%
EBITDA	K14%	0% ▼	14%

Performance

			2020
Generation	12,426 GWh	19% ▲	10,430 GWh
Customer Base	1,130,629	6% ▲	1,071,682
Customer/ Employee ratio	165	5% ▲	158
Head count (annual average)	6,853	1% ▲	6,799

Chairman's Statement

Mr Vickson Ncube
Chairman

Dear Stakeholder

ZESCO Ltd is a wholy state - owned enterprise. Government holds its share through the Industrial Development Corporation Limited (IDC). Clearly ZESCO Limited is owned by the people of Zambia and as a Board it is incumbent upon us exercise our oversight role in their best interest. It is our duty to manage the assets of this utility prudently by ensuring that the short, medium- and long-term interests are considered. This entails the managing of the delicate balance between conflicting needs.

The success of this Utility
is impacted by both internal and external factors. The post COVID-19 ramifications, global market turmoil and their social, economic and political consequences have not spared ZESCO Limited. Not least among these was the Ukraine - Russia which disrupted the energy and grain markets. The Board has to navigate and transcend all these in discharging its oversight role.

Locally, on 12th August 2021 Zambians went to the polls and gave the mandate to the United Party for National Development (UPND) under the leadership of His Excellency the 7th Republican President of Zambia Mr. Hakainde Hichilema. As a Board, we congratulate the President and give our best wishes to the President as he works towards the realization of his vision for Zambia. We are committed to aligning our strategies with this vision within the confines of the regulatory framework of the Country. Of particular interest to the Board is the new Government's ambition to grow the economy in all its spheres through rapid industrialization and digitalization. This will require not only sufficient but also reliable energy. The strategic focus of the Board will take this into account.

The following are the thematic focus areas:

1) Deliver affordable and clean energy: The Board will focus on the implementation of Renewable Energy Investment Plans that will increase installed capacity as well as available capacity and improve the energy mix. The Board is alive to the fact that most of our citizens rely on firewood and charcoal as their primary source of energy. The increase in installed as well as available capacity will create a path for weaning the citizens from this source of energy thereby providing the necessary protection to our trees and the ecosystem generally.

2) Ensure a cost-reflective tariff: A cost reflective tariff is good for the sustainability of the electricity supply industry and ZESCO. With the finalization of Multi Year Tariff Framework (MYTF) by 2022, it is our hope that there will be a predictable tariff migration path that is designed to ensure that the cost producing and proving power is reflected in the price at which the Utility sells power to its customers. There is always a paradox between affordability and cost reflective tariffs as the latter may not be affordable; hence the reason to invest in renewable energy using cheaper or concessional financing is the priority of the

Board. As a matter of principle availability supersedes affordability. It is easy to address affordability through price discrimination when a product is available. the Board will continue to focus its efforts on availability while ensuring that optimal cost structures are applied in the process.

3) Diversification of geographical location: currently all big hydro power stations are in the Southern circuit of the country, which in the recent past has been hit by prolonged droughts which contribute to power shortages. In order to mitigate the hydrological risk, apart from investments in alternatives sources of energy, the power utility firm is eyeing the Northern part of the country for hydro investments. One such investment is along the Kalungwishi River giving rise to Kundabwika hydro project with installed capacity of 151 Mega Watts (MW) and Kabwelume with 93MW. The utility firm will explore various financing models such as Public Private Partnerships (PPP), Joint Ventures and sustainable finance or green finance vehicles.

4) Support investments in off-grid solutions: In order to increase accessibility to electricity and race towards achieving the timeline for SDG7, ZESCO will play a key role in the area of off-grid solutions. Collaboration with the Rural Electrification Authority (REA) will be key in this drive.

5) Minimize transmission and distribution losses and enhance the overall reliability of the electricity network: ZESCO's investment in rehabilitation, expansion, reinforcement and maintenance is at the center of its strategy and more resources will continue to be deployed to enhance system reliability. To this end appropriate innovations and technologies will be embraced.

6) Interconnections: in the long run it is desirable that Zambia in interconnected with all its neighbours so that net power surplus in one country is used to balance net deficit in another country. As ZESCO Limited has limitation in resources, this will be carried out in stages. The integration of transmission projects directed to regional markets such as the Congo and Angola where the utility power company will extract more value is the focus of my Board.

Stabilizing the balance sheet, reducing volatility, building capability

During the year under review the corporation reported a profit of over K11 billion compared to 2020 losses of over K12 billion, this is mainly attributable to the appreciation of the kwacha against the US Dollar and streamlined operations.

The company's liquidity has greatly been impacted by the receivables locked in some of the mining firms, these receivables that have passed their maturity periods greatly affect the profitability of the company as provisioning for doubtful debts take effect as per IFRS 9.

The tariff at which ZESCO purchases power from the Independent Power Producers (IPP) continues to affect both profitability and liquidity of the firm, the engagement process on tariff renegotiation is on-going and the finalization is projected by end of 2022. Once finalized and assuring a win-win situation with the IPPs, the utility firm is expected to have more headroom for future capital investments in renewables.

The weakness of the balance sheet is exacerbated by US Dollar designated loans, among them the Government of Zambia (GRZ) on-lent loans, which increases exposure on both the gearing and currency exchange volatility. The government has been engaged through the Ministry of Finance to convert the lent on loans to equity while the others are being mitigated by exporting some of the power to neighbouring countries.

A Cost-of-Service Study, which is still undergoing reviews by various stakeholders, will highlight some of the challenges facing the utility and propose possible solutions.

10-year Rolling Strategic Plan 2022- 2032

A resilient ZESCO is a better ZESCO, my Board is working towards the transformation of the utility firm into a resilient organization. Exogenous shocks such as pandemics, inflation and lending rates have caused business disruptions and need to be managed by a more competitive, agile and resilient approach. Despite endogenous shocks being within our control, they require an equally more robust strategy.

The Managing Director, Engineer Victor B. Mapani, who was appointed on 3rd December 2021 and his team are working on introducing an operating model designed to steer the company through any shocks and subsequently deliver value. The ten-year rolling strategic plan is meant to drive the organization from its current state to improved overall business performance and focuses on the following Key Strategic areas:

- Improve Customer Service delivery: To achieve customer satisfaction, win customer confidence and loyalty.
- Improve Financial performance: To have a financially sustainable organisation that can meet its financial obligations as they fall due, secure its revenues and generate a satisfactory return for its shareholders.
- Organisational Restructuring: To enhance service delivery by optimizing the organizational structure and realigning the human capital to address business needs. To enhance conditions of service to retain high quality human capital.
- Enhance the use of technology: To be a utility that utilises technology to create and add value to the current business model across the value chain.
- Transform the corporate culture: To increase productivity and efficiency through behavioural change.
- Strengthen core business: To have a robust Generation, Transmission and Distribution maintenance regime that achieves customer satisfaction.
- SHEQ performance and risk management: To improve safety of operations, compliance culture and quality.
- Stakeholder engagement: To lobby key stakeholders to smoothen and expand business operations.
- Invest in Renewable Energy: To reduce dependency on hydro generation and improve climate resilience through diversifying the energy mix with the aim of increasing power generation capacity.

ESG Initiatives for ZESCO

ZESCO has adopted integrated reporting since 2014 and over the years there has been steady progress. We believe that managing the environment, social and governance (ESG) compliance has become even more crucial for the utility company. The board and our leadership are focused on continued improvement in our ESG performance, more efforts are required in designing the key ESG performance indicators that speak to the realization of SDGs by 2030.

The following are the ESG initiatives promoted by ZESCO:

a) Environment: Building renewable portfolio, energy efficiency and decarbonization
b) Social: Gender Diversity and inclusion, development of local communities/ community engagement.
c) Governance: Sustainable Governance structure, Robust accounting & risk management and stakeholder management.

Leadership

In October 2021, the shareholder dissolved the board and constituted a new one, of which I am privileged to chair. I wish to honour and pay glowing tribute to the former board under the leadership of Mr. Chibwe D. Mwelwa. We all want one thing, to have a better Zambia for all. My board will carry on from where the previous board left and I must state that under my watch as ZESCO board chair, the board and management shall serve the Zambian people.

Looking to the Future

As we look towards 2022 and beyond, we expect to see the benefits of the changes in leadership and the operationalization of the ten year-rolling strategy. We are confident that ZESCO going forward shall be a more sustainable company that meets its obligations and honors its promises.

Conclusion

I wish to extend my personal thanks to my fellow directors for their ongoing guidance and commitment shown thus far. On behalf of the board, I would like to express gratitude to all stakeholders for their ongoing support, and to every member of the ZESCO team for their efforts and sacrifice during a year of both political and corporate transition. We are confident that we will improve our operating performance, maintain the highest levels of safety and ethics as we work to deliver on our commitments to all stakeholders.

Mr Vickson Ncube
Chairman

Managing Director's Review

Mr Victor Benjamin Mapani
Managing Director

Dear Stakeholder

It is a rare honour to be appointed as Managing Director of ZESCO Limited (ZESCO), the national power utility company with assets valued at over ZMW 50 billion and most importantly endowed with great people. However, I come in at a time when the corporation's balance sheet is highly severed by over ZMW 30 billion trade payables and over ZMW 20 billion in interest bearing debt. These have been impediments to the growth and sustainability of ZESCO, debt sustainability is key to unlocking value.

As I look at the depth of ZESCO's financial position as at 31st December 2021, I believe with the right strategies put in place, significant value will be unlocked. Within a month, I zeroed in on resizing debt to manageable levels. This entailed tariff renegotiations with the Independent Power Producers (IPPs), removing cost excesses in the business processes and optimizing the human capital in the corporation.

For the 2021 financial year, major events occurred that had a bearing on the future of ZESCO. On 12th August 2021, Zambia went to the polls and gave an overwhelming mandate to the current government under the stewardship of his Excellency the 7th Republican President of Zambia, Mr. Hakainde Hichilema. With this change in political leadership, it gave rise to realignment of governance structures at ZESCO.

Building Blocks to Financial Sustainability

As a new Corporate Leadership Team (CLT) i.e. ZESCO Executive Directors, we determined to firstly put in place a Corporate Strategic Plan (10-year Rolling) and the organization structure to support it. I spent memorable time with my CLT and traversed the country to meet my fellow employees. This was to ensure that the Strategic Plan (the Plan) was shared with all employees in the organization. Further to ensure that the general road map was well laid out for all staff categories. Its implementation will begin in 2022.

In the Plan, the corporation formulated Five (5) Areas of Strategic Focus (Strategic Objectives) to enable it achieve its vision and mission as below;

1. To achieve customer satisfaction, win customer confidence and loyalty.
2. To be a financially sustainable organisation that balances the needs of its stakeholders.
3. To expand its Generation, Transmission and Distribution infrastructure guided by a clear integrated resource plan.
4. To enhance the power system maintenance programmes for Generation, Transmission and Distribution assets.
5. To optimize human capital in the quest to achieve business objectives.

The Strategic Objectives are condensed in four strategic areas of focus which are a must win for ZESCO:

a) Improve customer service delivery: There are several initiatives around this area of focus , such as improving:

- Customer application process
- Connection of new customers
- Customer service centres
- Faults management system to reduce faults resolution time, and;
- implement customer management systems with integrated analytical capabilities to measure customer experience

b) Strengthening the core business: the following are some of the initiatives developed under this area of focus:

- Increase a diversified power generation capacity
- Increase the power transmission transfer capacity
- Expand and reinforce the distribution network
- Improve the System Average Interruption Duration Index (SAIDI)
- Improve System Average Interruption Frequency Index (SAIFI)
- Improve Customer Average Interruption Duration Index (CAIDI)

c) Optimise human capital: the following are some of the initiatives developed under this focus area:

- Carry out a staff skills audit
- Review organisation structure
- Develop capacity building training programs
- Implement the performance management system and develop individual score cards.
- Develop a reward system for performance management
- Enhance staff retention schemes

d) Debt, Revenue, Cost and Working Capital management: This area of focus will emphasis on sales growth, solvency, profitability and liquidity improvements.

Financial Performance

In more than 3 years ZESCO has consecutively recorded net losses, however, in 2021 a net profit of ZMW 11 billion was earned and this was mainly due to an improved local currency against the United States Dollar and reduced provision for doubtful debt in comparison to the previous years.

There was an annual reduction in capital investment by 17% whereas debt servicing increased by 29%. The balance sheet strengthened marginally in 2021 compared to 2020; equity as a proportional of capital employed increased from 8% to 24%.

Safety

ZESCO thrives to operate in an injury free environment as we conduct our day to day activities. We have prioritized Safety, Health, Environment and Quality (SHEQ) and it is at the core of our business.

Leadership Changes

In the quest to support the vision, I had to reinforce the CLT by making five external appointments adding significant experience to a seasoned group of existing Directors.

Engineer Justin Chibombama Loongo was appointed Director of Power Generation, he previously worked for the mines, IPPs and ZESCO holding various senior positions in the power generation and transmission fields. At the time of his appointment, he was with Lunsemfwa Hydro Power Company.

Engineer Gyavira Malama Bwalya was appointed as Director of Projects and Planning, Eng. Bwalya had worked for both ZESCO and Botswana Power Corporation at various senior management levels.

Engineer Peter Chamfya was appointed as Director of Distribution and Customer Services. Prior to his appointment Eng. Chamfya worked as an individual Consultant and had previously senior management positions in ZESCO.

Mr. Maxwell Saya was appointed as Director Human Capital Development, Mr. Saya is a consummate Human Resources practitioner who worked for ZESCO at senior management level and later plied his trade in various Financial Institutions at senior management levels.

Counsel Matembo Matongo Lisimba was appointed as Director of Corporate Support Services. Prior to her appointment Mrs. Lisimba worked in the banking sector in Zambia and West Africa and also had previously worked at ZESCO as a legal practitioner.

Future Outlook

On the power demand side, the prospects are positive ,especially with the government's target of increasing mineral extractives output from eight hundred thousand metric tonnes to three million metric tonnes in the next 10 years. This will require reliable electricity supply and ZESCO positions itself to be the main supplier of power along side satisfying the desired government's intentions.

Zambia and Congo collectively hold over 70% of the materials required in the manufacturing value chain of Electric Vehicles and as ZESCO we see this as a great opportunity to provide reliable supply of power to both the manufacturing plants and service the mobility of electric vehicles.

With massive available power generation potential in Zambia, with identified sites yielding over 4,000 MW of hydro potential and reliable climate for other renewable energy sources such as solar and wind, ZESCO stand in a grand opportunistic position.

Conclusion

I would like to extend ZESCO's sincere appreciation to my immediate predecessor Engineer Victor M Mundende and those before him, for their inputs in steering ZESCO to where it stands today.

I strongly believe we are on firm ground to strengthen the foundation of ZESCO to move it to greater heights, a league of excellent service delivery and resetting it to financial stability.

The ongoing support of our shareholder, suppliers, lenders and customers is much appreciated and we will continue valuing your contribution to the success of ZESCO.

Words are not enough to comprehensively thank you the stakeholders for the tremendous support offered during the year 2021 for ZESCO Limited.

Mr Victor B Mapani
Managing Director

Customer Focus

Our customers continue to be important to the success of our business. It is for this reason that we strive to ensure that we deliver efficiently, effectively and with excellence (3E).

Despite the economic value derived from our customers, we also endeavour to improve the customer experience which includes considering the customers economic situation. Initiatives have been developed that help cushion the customers' bills whilst still being able to do the same activities. We value our customers feedback as that is our bedrock to continuous improved service delivery.

23,532 LED tubes were installed therefore reducing customer consumption by 1.25MW

In 2021, the Corporation continued on its journey of Demand Side initiatives intended to optimize power consumption of our customers without affecting their normal activities at the same time also try to cater for our growing customer base.

In our quest to be more efficient, the initiative dubbed "Energy Efficiency" that is intended to distribute 4 million LED bulbs that are anticipated to save some energy was derailed by the COVID 19 pandemic. During the period under review, below were some of the areas were the interventions are intended to help reduce customers consumption;

- Lighting (3.2 million LEDs) were installed
- 23,532 LED tubes were installed

Advanced Metering Infrastructure (AMI)

Implementation of the AMI infrastructure and a meter data management system (MDMS), along with the related business process changes, will improve overall customer satisfaction and increase operational efficiency in line with the company's 3E approach. The goal is to provide customers with tools to view their bills and usage data, enabling informed decisions about the amount of energy they use and related cost of services. Integration with other legacy systems such as Distribution SCADA also entails that the AMI will also be used as a tool for faults reporting as the meter has the capability to report all events defined as Alarms such as Power Down, Power up, phase sequence errors, missing voltage, missing neutral etc.

The Smart Meter platform will also help the utility monitor among other things; its distribution losses, provide a dual data flow to predict network load profiling, improve revenue collection thereby bringing about improved quality of service to the customer.

Internet based Payment platform for postpaid customers (SMARTPAY)

Postpaid customers have for a long time been using conventional payment methods which sometimes lead to delayed payment confirmations especially from commercial farmers and customers in far flung areas which could affect supply to the customer.

ZESCO Limited in partnership with Stanbic Bank Zambia, successfully launched an online payment solution for postpaid customers called SMARTPAY. This initiative will not only create payment convenience for postpaid customers but will also enhance revenue collection and reduce the number of queues in walk-in centres.

The SMARTPAY solution will allow a customer with a Stanbic bank account to electronically settle their energy and/or capital contribution bills using their smart devices at the convenience of their homes or offices.

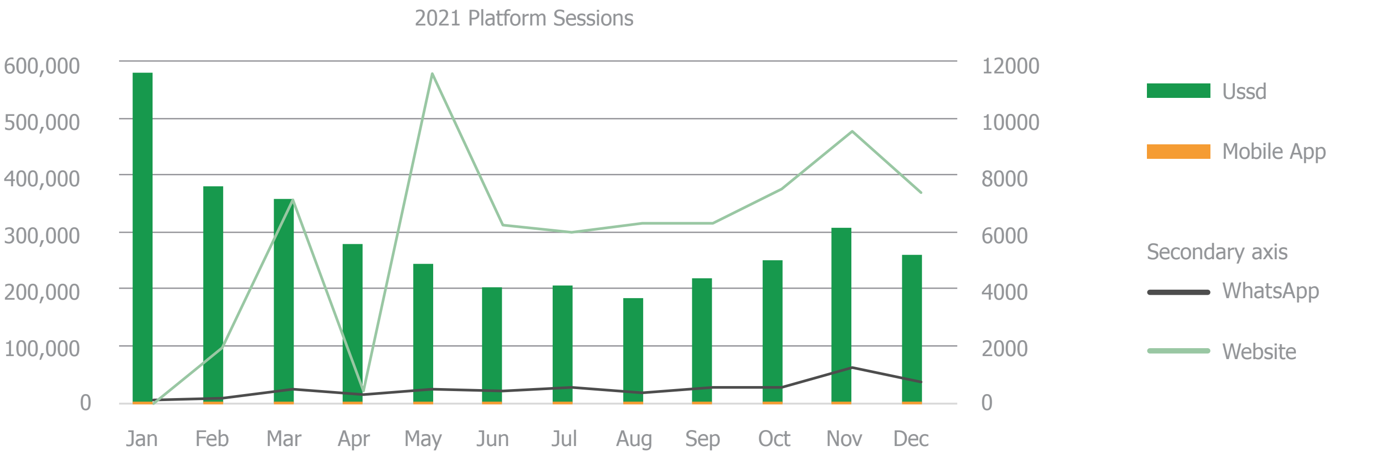
With the COVID 19 pandemic still around, this system will help avert its spread.

Innovation & Development

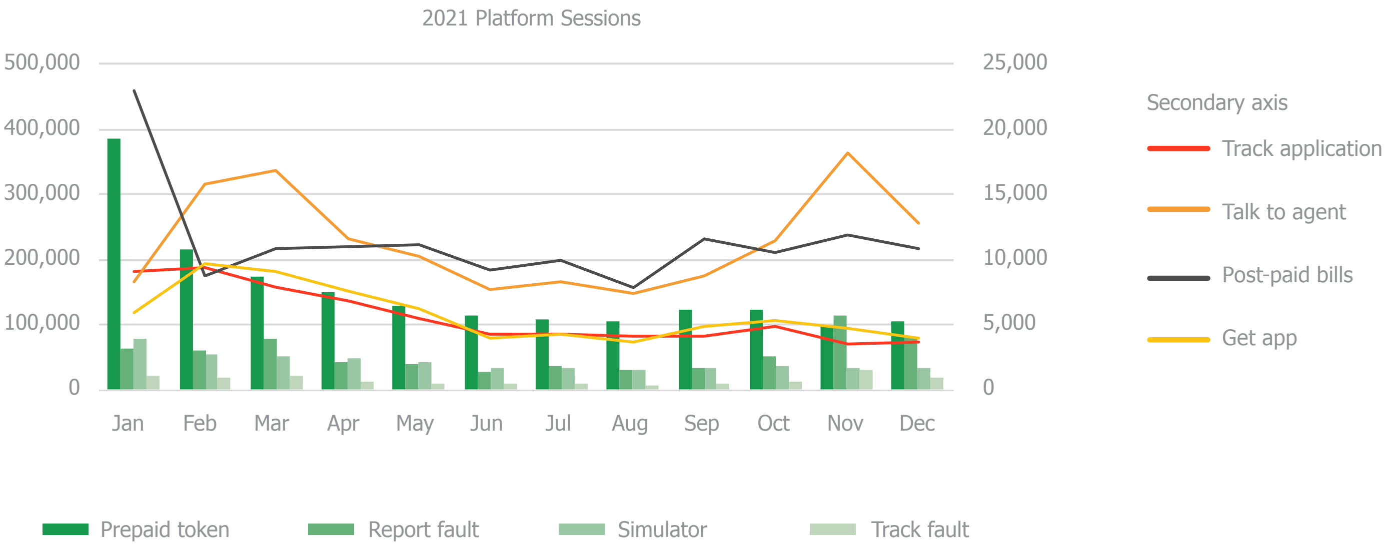
Our goal is to foster innovations that will allow us to provide efficient and excellent electricity services and energy solutions to both domestic and international customers. We have therefore remained responsive to our employees' and customers' digital needs by innovating value-added processes.

This year, we focused on enhancing the ZESCO E-power platforms that we deployed in 2020. It is exciting to see how they have enabled customers countrywide use these digital solutions to quickly access information and services at their convenience. The Mobile Application, the USSD Code, the SMS facility, and the WhatsApp business platforms are some of the many digital platforms that were upgraded for the convenience of our customers. Offering great features such as: faults reporting and tracking; new connection application and tracking; outage updates; residential tariff simulation; viewing of prepaid tokens; and energy saving and safety tips.

With over nine (9) million mobile internet users in the country, over 3,549,180sessions were performed on all of our four major E-power platforms. The USSD recorded the highest interaction with 70.18% followed by the Mobile app, the website with 0.08% and 27.69% respectively. The WhatsApp chatbot performed at 2.05% of the total sessions.



Menu sessions



To some extent, these increased interactions on the ZESCO E-Power platforms have reduced the number of people that physically visit Customer Service Centres and the call traffic to the Call Centre

Promoting Innovation and Digital Transformation in ZESCO

In addition to our E-power platforms, we have continued to encourage all our staff to embrace internally bespoke solutions that create and add value to the current business model to make it more efficient, effective and responsive in ways that benefit everyone.
In the fourth quarter, we launched our first internal ICT expo under the theme, "Promoting Innovation and Digital Transformation in ZESCO". The expo aimed at raising awareness on various digital initiatives that create synergies internally. Similarly, our goal was also to gain employee buy-in.

At the same event, we launched the Wellness and Occupational Health Management System. The system allows our employees access medical facilities anywhere in the country.

The deployment of this system could not have come at a better time when the impact of the Covid-19 Omicron subvariant wave was at peak.

Employing digital solutions to promote business continuity

The COVID-19 pandemic has rapidly changed how we work, communicate, and interact with one another. We understand how critical it is to sustain our operations amid the pandemic and we will employ digital innovative solutions to enhance our business operations.

This year, we rolled out a secure system that allows employees to work from home and remotely by using an application called FortiClient. The FortiClient VPN solution ensures that our staff have access to our systems. In so doing, this initiative reduced the risk of contracting or inadvertently spreading the virus and enhanced business continuity.

ZESCO'S SUPPORT TO SDG'S

The advent of COVID-19 and the physical impacts of climate change have highlighted the interdependencies between businesses and communities. Business success relies on thriving communities. For the electricity utilities sector, this elevates the importance of tackling the challenges of sustainable electricity access and affordability to advance equal opportunities, reduce inequalities and mitigate the negative impact of business operations on the climate.

Zesco recognizes that the opportunities presented in sustainability must be driven by tangible actions that the organization undertakes to maximize its potential for positive SDG impact across short-, medium- and long-term time horizons. The ESI has a fundamental role to play in realizing the SDGs, as the sector will shape the future of sustainable energy – which is essential for economic growth, social equity and efforts to combat climate change. The table below highlights the organizations impact opportunities and actions undertaken in the drive towards sustainability.

Theme	Opportunity	Actions	SDG	SDG Target	Performance On Target
Energy and Climate	Enhance electricity infrastructure for a resilient and efficient system	Increase capacity and improve the reliability of the electricity transmission and distribution system	7 AFFORDABLE AND CLEAN ENERGY	7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries	Through the Lusaka transmission and distribution rehabilitation project, projects have been undertaken that have targeted the upgrading of the existing transmission networks, construction of new transmission lines and switching stations to improve the transmission and distribution systems in the Lusaka area.
	Enhance cross border power trade	Develop transborder infrastructure for regional economic growth and development	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Initiatives such as the ZIZABONA INTERCONNECTOR PROJECT the brainchild of national utilities of Zimbabwe, Zambia, Botswana and Namibia which is currently underway will result in the construction of an interconnector for increased cross border power trade.
	Build climate resilience in the power sector	Diversification of the energy mix to build resilience in power generation	13 CLIMATE ACTION	13.1 Strengthen resilience and adaptive capacity to climate related hazards and natural disasters	ZESCO is undertaking projects in solar and wind power generation such as the Kanona (100MW) Photovoltaic and 150 MW wind power plant project. These projects are intended to build resilience in ZESCO's ability to adapt to adverse effects of climate change on a system dependent on hydro generation, whilst contributing to the reduction of carbon dioxide and other greenhouse gases that contribute to global warming.
People and communities	Increase access to electricity in rural areas for improved productivity and quality of life	Build electricity infrastructure in rural areas	13 CLIMATE ACTION	7.1 By 2030, ensure universal access to affordable, reliable, and modern energy services	Through the World Bank funded ESAP project which seeks to improve access to electricity in the rural areas by subsidizing the cost of households and SME connections, 40,311 customers accessed electricity in rural areas.
	Attract and retain a diverse and inclusive workforce	Provide access to health services for employees and their families	7 AFFORDABLE AND CLEAN ENERGY	3.8 Achieve access to quality essential health care services	ZESCO launched the Wellness and Occupational Health Management System, a system that allows employees access medical facilities anywhere in the country.
	Contribute to Gender Equality		3 GOOD HEALTH AND WELL-BEING	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life	There continues to be female representation on all levels of decision making including on Zescos board membership and corporate leadership team.
Nature	Protect, restore and promote sustainable use of ecosystems	Implement sustainable policies and practices that positively contribute to climate change measures	5 GENDER EQUALITY	13.2 Integrate climate change measures into company policies, strategies, and planning	ZESCO has adopted policies that provide for the development and operation of ZESCO's generation, transmission and distribution facilities by conducting Environmental and Social Impact Assessment (ESIA) studies. ZESCO continues to participate and contribute to the various annual tree planting exercises carried out in the country such as the ikelenge annual tree planting exercise.

Stakeholder Engagement

We interact with various stakeholders every single day and understanding the interests of each stakeholder group ensures the success of business strategy. This process is aligned with our core values and guided by the Code of Ethics. We nurture constructive relationships to remain a responsible corporate citizen and operate the business sustainably. As we engage with stakeholders, we strive to operate ethically.

Our relationships to stakeholders are categorized into;
- Collaborate
- Involve
- Consult

The following analysis outlines stakeholder groups who have a substantive impact on our ability to create value. This analysis illustrates the stakeholder engagement process highlighting the need to work closely with them, the expected outcomes, engagement frequency and engagement method. Furthermore, we conducted internal assessment of the quality of our current approach to engaging with these stakeholder groups.

Government and Shareholders

Frequency and Engagement Methods

Frequency

Engagement is regular and ad hoc, depending on matters arising or company developments, industry-related changes and opportunities for dialogue specific forums like industry conferences and government-organised events.

In person, virtual, direct, or indirect, at company level or through industry partners which lobby on behalf of the Electricity Supply Industry (ESI).

Engagement Methods

- By email, telephone and meetings
- Annual reports, Interim and annual results presentations
- Media Interviews
- Website
- Expo and Investor conferences
- Infrastructure site visits and commissioning
- Consultation
- Participation in public fora
- Industry consultative bodies
- Partnering on various social programmes
- Participation in parliamentary processes

Capital(s) contributed or Impacted

Expected Output and Outcome

Why should we work closely with these?

- They determine legislation, business and regulatory environment in the sector
- They are providers of capital and other resources

Expected output and outcome

- Buy-in/support into the Company's strategic objectives
- No interference in day-to-day running of company affairs
- Government financial Guarantees
- Support through policy enactment & implementation
- Less resistance and facilitation of new policy implementation
- Be advocates/lobbyists for positive policy changes
- Arms length relationship

What are their interests?

- Organizational Strategy that is aligned to shareholder & GRZ goals
- Good Organizational Performance (KPIs)
- Return on Investment (ROI)
- Dividends
- Institutional Governance
- Improve access to electricity
- Infrastructure development
- Improvement of social wellbeing of citizens
- Complying to rules & regulations
- Cost of services to citizens
- Contribution to the tax base;
- Impact and management of COVID-19

Our response

- We conducted facility tours to acquaint our partners with our operations and processes.
- The government and shareholders were invited to participate at the commissioning of the Kafue Gorge Lower Hydro Power Station

Capital(s) contributed or Impacted

Natural, Financial, Manufactured, Social and relationship, Human and intellectual

Value to stakeholder

- Return on Investment (ROI)

Investors (Lenders)

Capital(s) contributed or Impacted

Frequency and Engagement Methods

Frequency
Monthly and quarterly basis

Engagement Methods
- Personal meetings,
- conferences
- Annual and quarterly reports
- Projects and Investment page on our website

Expected Output and Outcome	What are their interests?
Why should we work closely with these? • To provide financial capital **Expected output and outcome** • Project Financing, Corporate financing and Support	• Institutional Governance • Financial Performance • Liquidity • Strategy to ensure sustained financial growth • Responsible utilisation of funds

Our response

- Continued direct engagement with lenders
- Consistent reporting of company performance
- Dedicated relationship management team

Capital(s) contributed or Impacted

Financial

Value to stakeholder

- Return on investment

Employees

Capital(s) contributed or Impacted

Frequency and Engagement Methods

REGULAR Electronic Communication, Internal Bulletins, Publications, Safety Meetings, Staff Broadcasts, Trainings, Meetings & Workshops

Staff integrity awareness engagement

Expected Output and Outcome

Why should we work closely with these?

This category of stakeholders represents our human capital that provides the manpower, knowledge, skills, experience and expertise necessary in delivering our mission and strategy. Constructive employee engagement promotes stable employee relations, enhances productivity, and ensures alignment in delivering on our strategic objectives

Expected output and outcome

- Cordial industrial relations,
- Increased productivity and maintaining a focus on our strategic objectives.
- Adherence to the Corporation's Code of Ethics and Integrity Related Policies.
- Staff retention
- Unethical conduct
- Weaknesses in systems and processes and remedial measures in the Corporation.

What are their interests?

- Personal development
- Re-skilling & Training
- Fairness and equity
- Better conditions of service and employee welfare
- Accreditation of clinics to provide health services to ZESCO employee.

Our response

- Management and meetings
- Employee Sensitizations
- Workshops and trainings to identify vulnerabilities in processes and systems
- Occupational health
- Safe working conditions
- Industrial relations meetings
- Salary reviews

Capital(s) contributed or Impacted

Financial, Social and relationship, Human and intellectual

Value to stakeholder

- Job security
- Reward and recognition
- Education and training
- Talent management and career planning

Suppliers

Capital(s) contributed or Impacted

Frequency and Engagement Methods

Regular Meetings/ Workshops, One on one meetings, notices in periodicals and the procurement page on the website.

Expected Output and Outcome

Why should we work closely with these?

- Providers of raw materials and services

Expected output and outcome

- Credible/Trustworthy partners in supply chain management
- Speed of delivery
- Quality of products/ services

What are their interests?

- Repeat business/ supply contracts
- Timely payment and fair terms;
- Continuity of contracts and sustainability of business

Our response

- Increased focus on procurement with local suppliers
- Well-developed and implemented policies relating to suppliers,
- Annual procurement planning

Capital(s) contributed or Impacted

Manufactured, Social and relationship and Financial

Value to stakeholder

- Business continuity

Regulators

Capital(s) contributed or Impacted

Frequency and Engagement Methods

Frequency
REGULAR: Electronic communication, letters, reports, publications, meetings, hearings & workshops

Engagement Methods
Meetings, Reports, Hearings, Emails, Letters, Workshops

Expected Output and Outcome

Why should we work closely with these?
This category of stakeholder is the key regulator in the energy sector. Apart from regulatory compliance, they also issue the utility and other players in the sector with generation, distribution, transmission and supply licenses. Regulation is done via agreed on Key Performance Indicator Framework (KPI) that is reviewed every three years.

- Licencing
- KPI compliance
- Bi-annual and annual performance reporting
- Tariff application
- PPA approval
- Costs services review

What are their interests?

- Institutional Governance
- Financial and Technical Performance
- Equitable electricity tariffs
- Environmental sustainability
- Transparency
- Compliance with all applicable laws and regulations

Our response

- The Company maintains a strong focus on ensuring that it complies with all applicable regulatory requirements.
- Cooperate with regulators during statutory audits

Capital(s) contributed or Impacted

Natural, Financial, Manufactured, Human,and Social and relationship

Value to stakeholder

- Compliance

Media

Capital(s) contributed or Impacted

Frequency and Engagement Methods

Frequency
REGULAR

Engagement Methods
- Interviews: Radio and TV interviews, Radio and TV discussion programmes,
- Facility Tours,
- Face-to-face and telephonic engagement
- Media briefings
- Media releases
- Product-related publicity
- Product launches
- Media Workshops,
- Distribution of printed handouts

Expected Output and Outcome

Why should we work closely with these?
Include: Radio Stations, Television Stations, Bloggers, Vloggers

This category of stakeholders increase visibility of the Corporation by informing the public and other stakeholders about its activities. They are involved in most of the companys activities because they are fundamental in promoting the corporate image.

- Accurate understanding and factual reporting of the corporation's projects, operations, products and services.
- The media are also key in fostering constructive relationships with other stakeholders.

What are their interests?
- Being informed on projects and key activities
- Transparency on performance.
- Stories on ZESCO that sell
- Stories of significance to the public

Our response
- Conducted media briefings and interviews
- Facility Visits to familiarise the media with the companys operations and projects

Capital(s) contributed or Impacted

Social and Relationship

Value to stakeholder
- Stories on ZESCO that sell
- Stories of significance to the public

Customers and Clients

Capital(s) contributed or Impacted

Frequency and Engagement Methods

FREQUENT, Digital & printed Media, Town Hall Meetings, Corporate Social Investment (CSI), Charitable Donations and Sponsorships , Sensitisation Campaigns, information displays, Customer day engagements

- Customer service centres and call centres
- The website ,the ZESCO Mobile App, Facebook Chatbot, WhatsApp, USSD Platform and Social media interaction

Expected Output and Outcome	What are their interests?
Why should we work closely with these? Purchase our products and services, providing the basis for revenue growth. • Support • Good image/perceptions • Mutual trust	• Safe, reliable and affordable electricity • Transparency in decisions & activities that concern them • Information • Service delivery • Raise Integrity Awareness

Our response

- Customer Integrity Awareness and sensitisation
- Efficient service delivery

Capital(s) contributed or Impacted

Financial, Social and Relationships

Value to stakeholder

- Improved customer experience

Capital(s) contributed or Impacted

Frequency and Engagement Methods

REGULAR

- Group Meetings, One-on –one Meetings, reports, Commissioning of significant Projects, Social Media, road shows, town hall meetings
- Community interaction in projects relating to education, health, sport, cultural and financial inclusion
- Public participation on radio and television programmes

Expected Output and Outcome	What are their interests?
Why should we work closely with these? Includes: Those communities in the vicinity of our operations on whose goodwill we depend, and who are directly impacted by our operations led by Local Government Authorities, Traditional Chiefs & other Authorities We are accountable to our host communities to be a responsible corporate citizen. Communities can directly affect our social license to operate. In line with our values, we aim to leave them better off for our having been there during and after project implementation. We aim to manage expectations, uphold human rights and ensure community and asset security. Mutually beneficial partnerships with host communities enhance shared value creation, which help in retaining our social licence to operate. Strengthen the socioeconomic context in which we operate, inform our reputation. • Buy-in into ZESCO's processes and projects • Public support • Help to stop Vandalism • Appreciation of Safety rules & Practices • Afford Land Rights for Wayleaves & servitudes or infrastructure developments	• Access to affordable Electricity • Operations/Activities that empower the community • Improved local economy and social wellbeing • Compensation of displaced settlers • Delivery of national development goals; • Responsible investment in infrastructure; • Transparency on our performance;

Our response

- Awarding of bush clearing contracts to local communities
- Provision of the low cost life line tariff
- Participated in Expositions across the provinces to showcase major projects and the newly introduced online platforms.
- Provided necessary support towards the Covid 19 pandemic such as medical protective equipment and donations

Capital(s) contributed or Impacted

Social and Relationship

Value to stakeholder

- Investment in community socio-economic development projects
- Local employment opportunities
- A stimulus for local economic growth
- Community health and safety

Throughout the period, we continued to adjust to the changes necessitated by the pandemic, and we recognised the importance of these changes as they evolved throughout the year. With vaccine programmes having a positive effect and restoring confidence and stability, engagement activities continued in smaller groups and conducted digital interactions for larger groups.

CFO Report

"We are steadfast in our confidence that the initiatives employed will realize our aspiration for the entity to grow and maintain consistent and resilient profitability, …and the achievement of financial and operational sustainability while ensuring that shareholder value is realized, and consistent and reliable service delivered to the customer."

Performance Overview
The ZESCO group recorded improved financial performance compared to last year mainly due to the following:

- 21% appreciation of the Kwacha closing at K16.68 compared to the prior year resulting in favorable foreign exchange translation gains.
- Increased revenue arising from increased power generation and volume sales.
- A reduction in our Cost of sales and the Bad debts provisioning expense.

This favorable financial performance was however marred by a marginal reduction in the Asset Base.
At the advent of an enhanced strategic direction, initiatives have been employed by Corporate Leadership Team (CLT) to restore profitability including the finalization of tariff renegotiations with most of the Independent Power Producers (IPPs) while control on various operating expenditure items has continued.

	Group K'000		Company K'000		Contribution %	
	2021	**2020**	**2021**	**2020**	**2021**	**2020**
Revenue	**22,002,025**	**18,476,529**	**21,897,616**	**9,524,935**	**100**	**52**
Cost of sales	(9,137,685)	(9,500,951)	(9,914,063)	(5,285,630)	108	56
Gross Profit	**12,864,340**	**8,975,578**	**11,983,553**	**4,249,305**	**93**	**47**
Other operating income	811,307	638,009	859,616	561,475	106	88
Other losses	8,745,791	(11,373,026)	7,505,883	(1,652,092)	86	15
Marketing expenses	(8,719)	(12,812)	(8,144)	(19,718)	93	154
Administration expenses	(4,970,506)	(4,412,257)	(4,847,689)	(3,449,279)	98	78
Other expenses	(5,729,254)	(9,675,646)	(6,001,898)	(2,319,648)	105	24
Finance costs	(963,839)	(795,096)	(874,971)	(554,735)	91	70
Share of profit of associates	(25,836)	8,557	-	22,247	0	260
Share of profit of a joint venture	(25,561)	(54,902)	-	440,064	0	-802
(Loss) Profit Before Tax	**10,697,723**	**(16,701,595)**	**8,616,350**	**(2,722,381)**	**81**	**16**
Income tax credit	(253,971)	743,947	(33,920)	4,068,348	13	547
Loss for the year	**10,443,752**	**(15,957,648)**	**8,582,430**	**1,345,967**	**82**	**-8**

Revenues

Group Revenue at K22 billion, representing a 19% increase over 2020 across all customer categories. The increase was mainly due to increased volume sales in domestic, mining and export categories following favorable rainfall during the 2019/20 season. This was coupled with a tariff increase for the domestic category. There was also K105 million realized from internet connectivity by Fibrecom, our subsidiary in the Internet Service Providers (ISP) space.

Revenue	**2021**	**2020**	**2019**	**+/-**	
Category	**K'000**	**K'000**	**K'000**	**K'000**	**%**
Mining	11,839,462	10,962,907	6,203,138	876,555	8
Residential	4,090,453	2,440,240	1,386,252	1,650,214	68
Industrial and Agricultural	2,854,211	2,327,551	1,277,497	526,660	23
Exports	2,427,699	2,169,100	1,150,969	258,599	12
Commercial	685,620	576,730	308,538	108,889	19
IP Connectivity	104	-	-	104,580	0
Total	**22,104,580**	**18,476,529**	**10,326,394**	**3,525,496**	**19**

Cost of Sales

The cost of sales in the period reduced by K363 million, a 4% decrease over 2020. IPP purchases contributed almost 400% of the decrease in cost of sales. The major driver in the reduction is the Power Purchases from the subsidiaries within the ZESCO Group. This was compounded by the decrease in power imports and export wheeling charges resulting from an appreciated local currency.

By the end of the review period, tariff renegotiations with Maamba and Itezhi tezhi Power Corporation (ITPC) were being finalized and we are confident that these tariffs will be revised downwards.

	2021	2020	+/-	Contribution %	+/-
	K'000	K'000			
Local purchases	5,793,346.00	7,160,480.00	(1,367,134.00)	376	(1,367,134.00)
Direct labour costs	1,016,724.00	976,688.51	40,035.50	-11	40,035.50
Maintenance costs	960,920.00	246,373.00	714,547.00	-197	714,547.00
Power imports	31,707.72	313,068.24	(281,360.52)	77	(281,360.52)
Generation water usage costs	316,622.00	138,247.00	178,375.00	-49	178,375.00
Local wheeling charges	1,018,364.71	661,034.00	357,330.71	-98	357,330.71
Export wheeling charges	-	5,060.76	(5,060.76)	1.4	(5,060.76)
Total	**9,137,684.43**	**9,500,951.50**	**(363,267.07)**		**(363,267.07)**

Gross Profit Margin

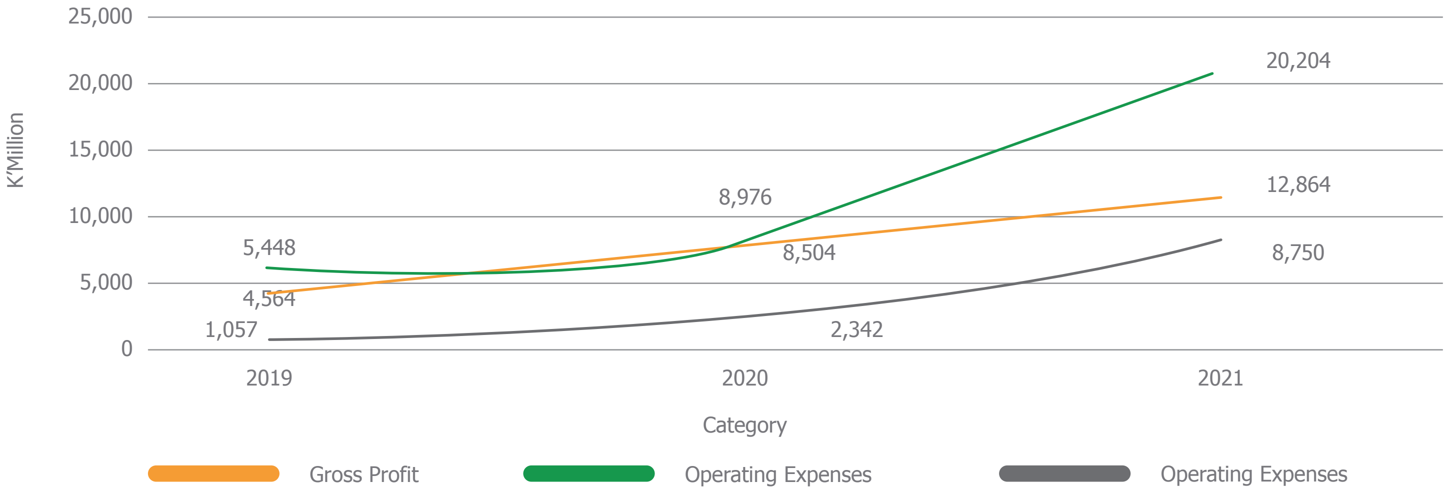
The group's Gross Profit Margin has continued to increase due to increased turnover and reduced cost of sales, from 49% to 58%. This consistent growth provides a necessary buffer for operating expenses and debt service cover which the group is in dire need of. Some of the initiatives employed by the Corporate Leadership Team (CLT) to sustain this growth trajectory are detailed in the next section of my Report.

Operating Expenses and Profitability

Additionally, group profitability was significantly bolstered by a 22% reduction in operating expenses arising mainly from foreign exchange gains recorded in the year compared to foreign exchange losses the previous year. This appreciation of the Kwacha also resulted in reduced impairment losses on trade receivables, despite diminishing the trade receivables number in the Balance Sheet. The corporation's financial performance continues to be adversely affected by the provisioning expenses, a spin-off of mostly disputed trade receivables with mining customers and penalties for delayed settlement of invoices.

To minimize provisioning expenses relating to domestic receivables, a debt swap was agreed between the Central Government, Zambia Revenue Authority (ZRA), Water Utilities and ZESCO Limited for K329 million. In addition, a thirteen-year bulk supply agreement (BSA) was signed with Copperbelt Energy Corporation (CEC), which will greatly reduce the accumulation of mining receivables, and the subsequent provisioning expense.

Key Financial Elements

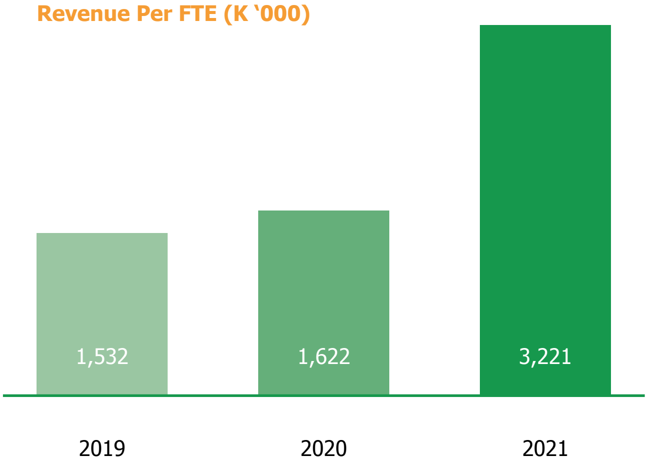


The Operating Profit resulted in a positive Earnings Before Interest, Depreciation, tax, and amortization (EBIDTA) because of the implementation of revenue management, cost optimization and operational stabilization initiatives as per the ten-year rolling strategy.

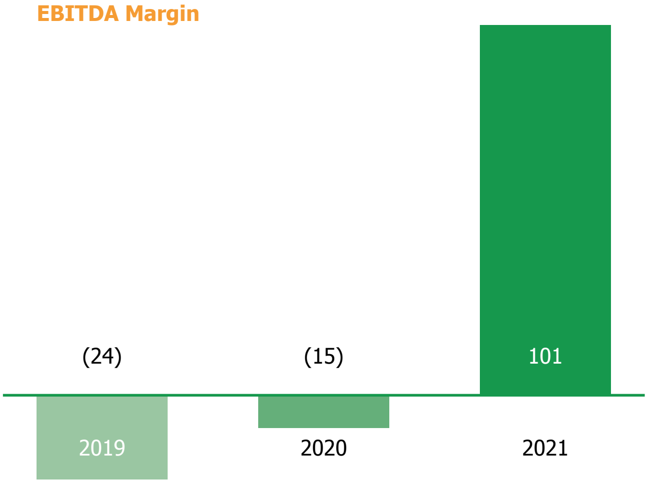
	K'Million	K'000	K'000	K'000
	2021	**2020**	**2019**	**2018**
EBITDA Margin				
Loss/Profit before tax	10,698	(16,702)	(5,932)	(2,722)
Add back				
Finance Costs	964	795	(630)	555
Depreciation and Amortisation Expense	1,985	1,957	1,940	1,974
Amortisation of Capital Grants and Contributions	(197)	(187)	(174)	(151)
Exchange Losses	8,750	11,371	2,342	1,652
EBITDA	**22,200**	**(2,765)**	(2,455)	1,308
Revenue	22,002	18,477	10,326	9,535
EBITDA Margin	**101%**	**-15%**	-24%	14%

Group Financial Overview

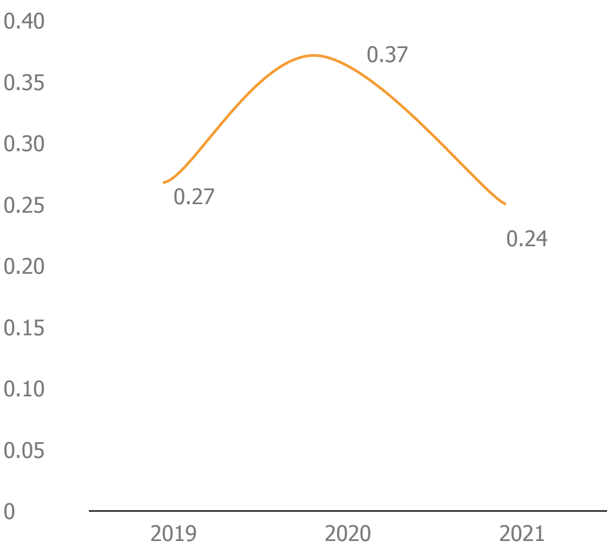
Revenue Per FTE (K '000)



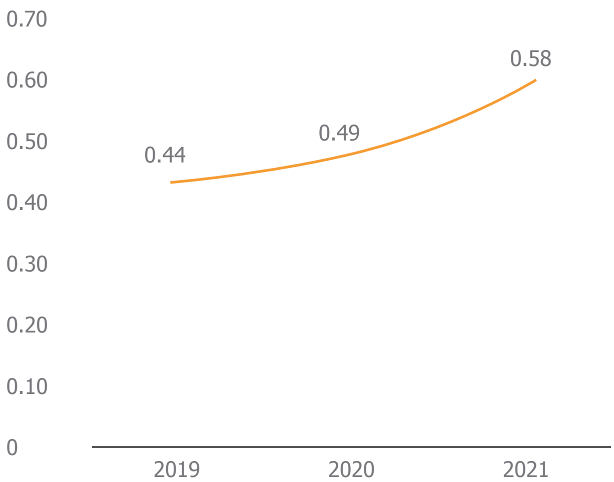
EBITDA Margin



Asset Turnover



Gross Profit Margin



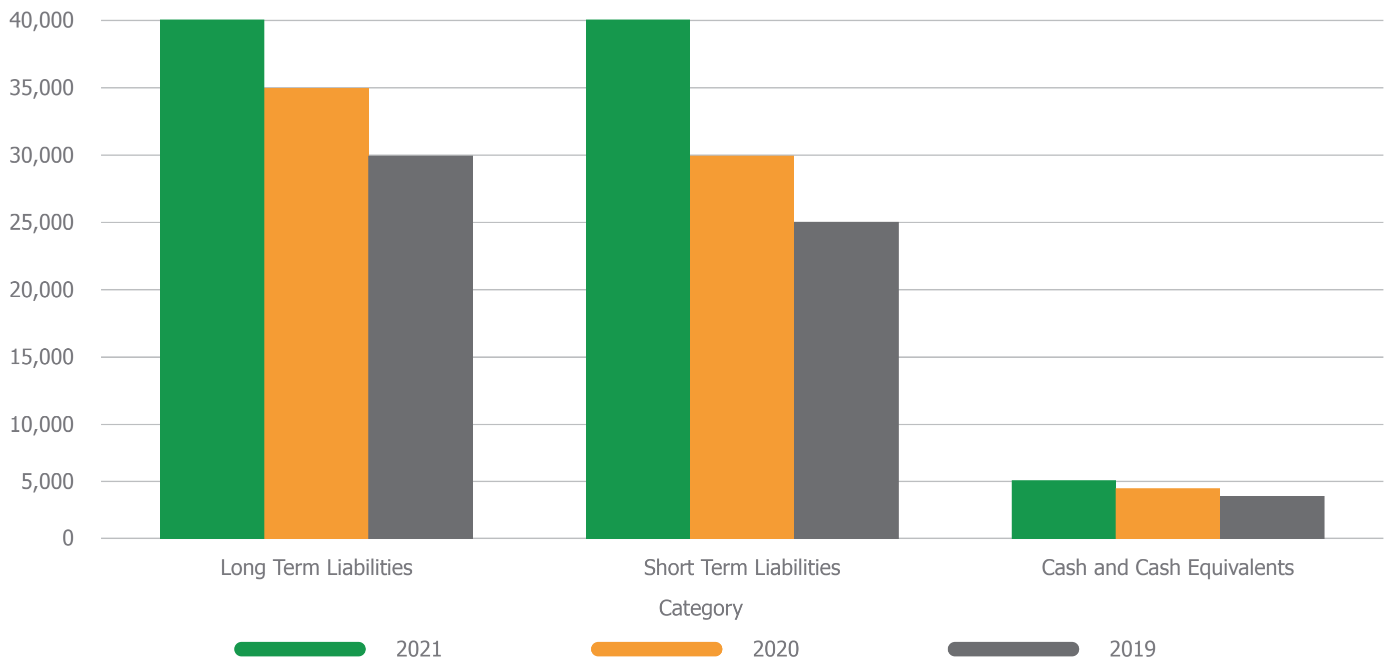
Group Cash flow, Net Debt and Balance Sheet

The group recorded a 285% reduction in cash and cash equivalents mainly due to the exchange gains recognized on borrowings, the increase in trade payables and investment in Capital Works in Progress. These factors adversely impacted the net cash generated from operating activities by 72% over the two years to K4.6 billion.

	2021	2020	2019	2018
	K'000	K'000	K'000	K'000
Operating				
Loss before tax	10,697,723	(16,701,595)	(5,932,417)	(2,835,732)
Adjustments for non-cash items	(1,642,344)	24,071,518	10,451,196	4,584,763
Movements in working capital, interest and tax paid	(3,510,818)	9,846,892	3,440,612	2,487,125
Net Cashflow from Operating Activities	4,592,792	16,259,632	7,275,028	4,236,156
Net Cash used in Investing Activities	(4,894,084)	(17,199,115)	(10,461,828)	(4,148,938)
Net Cashflow from Financing Activities	(1,160,731)	1,731,364)	3,059,925	258,471
Net Increase in Cash and Cash Equivalents	**(1,462,023)**	**791,881**	(126,875)	345,689

The group's Net Debt reduced by 16% mainly due to the reduction in borrowings which are mostly foreign denominated due to the appreciation of the Kwacha over the period. Further, there was reduced disbursements from lenders during the period.

EBITDA Margin



Ten Year Rolling Strategy

To drive ZESCO from its current state and ensure improved overall business performance, the Corporate Leadership team has adopted a ten-year rolling strategy. One of the strategy's pillars is financial sustainability with the key focus areas being to ensure that the organization can meet its financial obligations as they fall due, secure its revenues, and generate a satisfactory return for its shareholders.

The focus area intends to address:

- The unsustainable debt specifically to Independent Power Producers (IPPs).
- Outstanding Receivables from mining, Government, Water Utilities, and state-owned entities.
- Non-Cost reflective domestic electricity tariffs and;
- High operational costs
- To realize the aim of the strategy, the following initiatives, some of which are already bearing results, have been initiated:
- Debt

Engagements with our lenders and IPPs have continued with a view to restructure some of the existing loan

obligations and some IPP tariffs.
The shareholder, the Government of the Republic of Zambia (GRZ) through the Industrial Development Corporation (IDC) has been approached with a view to convert some On-Lent loans to equity.

- **Revenue**

Efforts have also been made to sign Power Supply Agreements (PSAs) with some industrial customers so as to increase foreign denominated inflows of revenue.

- **Costs**

Optimizing the cost structure by leveraging on technology and ensuring all capital projects meet the acceptable Rate of Return while all non-critical projects will be deferred.

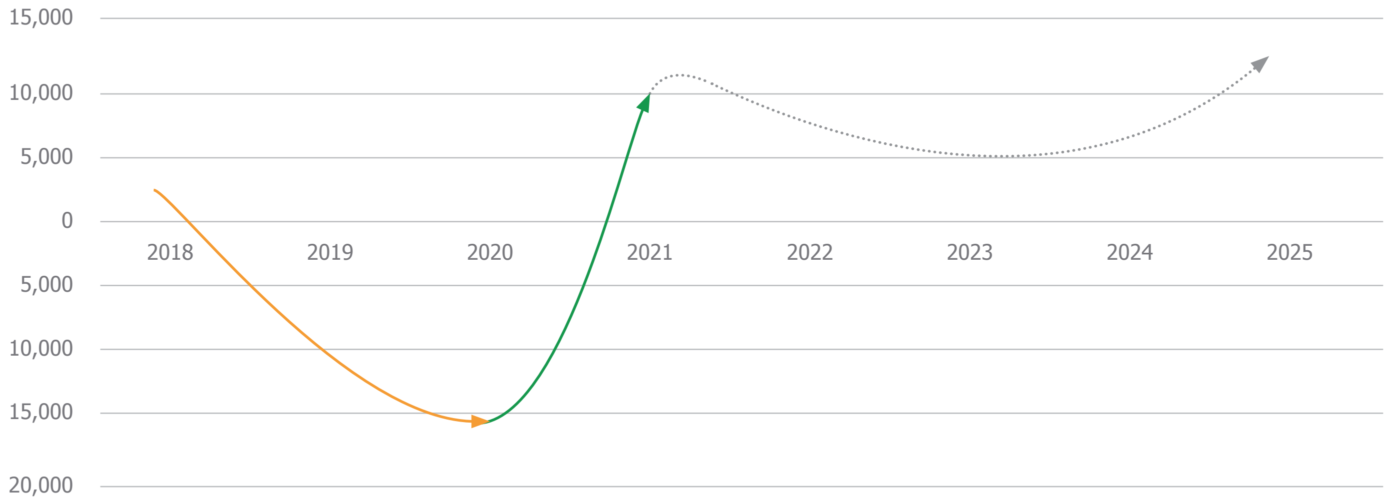
- **Operations**

Improving service delivery and security of supply.

- **ESI Structure/Regulation**

Support the completion of the Cost-of-service study and exploiting the sector reforms through suspension of non-economic electricity purchases and instead realizing wheeling income from such IPPs.

Profit for the year



Prospects

We are steadfast in our confidence that the initiatives employed, will realize our aspiration for the entity to grow and maintain consistent and resilient profitability, despite the volatility in the past few years. The management team and staff are committed to the success of these initiatives and the achievement of financial and operational sustainability while ensuring that shareholder value is realized, a consistent and reliable service is delivered to the customer.

Conclusion

Finally, we welcome Messrs. Grant Thornton who join us as our new External Auditors following the resignation of Deloitte, who we thank for their service, at the end of the year. Grant Thornton returns as our Auditors after a six-year absence, and we look forward to developing a mutual partnership.

Our Tax Footprint

ZESCO and its subsidiaries view their tax responsibilities as an essential part of being a good corporate citizen.

The Board of Directors is ultimately responsible for ensuring that sound tax management and policies are put into place. The responsibility for handling and reporting on tax-related matters rests with the Director of Investments and Finance.

Our Approach

Ensuring tax compliance involves accurately preparing and submitting tax returns, paying taxes in a timely manner, and treating all transactions correctly from a tax perspective.

We are committed to working with ZRA in a collaborative, transparent and compliant manner. This includes engaging ZRA on interpretation of tax law to avoid being at variance with the law. Furthermore, the corporation collects outstanding taxes on behalf of ZRA from suppliers and contractors associated with us and ensure tax compliance through regular checks of tax clearance.

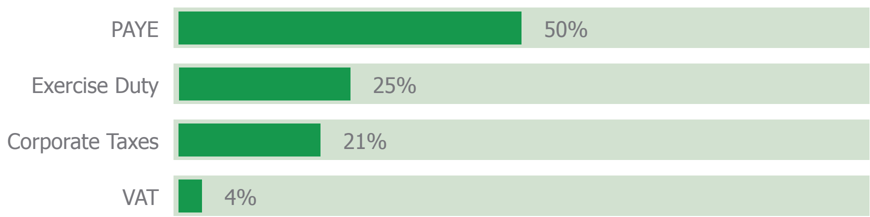
The company takes part in frequent tax seminars and trainings to keep up with the ever-changing tax regulations, which helps with both compliance and accurate reporting. The business has gone a step further by engaging tax expert and specialist in transfer pricing, to advise ZESCO Limited and its subsidiaries.

Tax audits are done on a regular basis and as a corporation, we approach these audits with the seriousness they deserve.

If an employee is discovered to be in violation of tax laws, the corporation will take disciplinary action against them.

Tax paid

A total of K1.3 billion was paid in taxes as shown below.



PAYE	K658.19 Mn
Exercise Duty	K331.31 Mn
Corporate Taxes	K281.50 Mn
VAT	K48.97 Mn
Total	**K1,319.97 Mn**

Corporate Governance

Corporate Governance

- Change of Government;
- Change of Board;
- Leadership Team
- Change of Corporate Leadership Team;
- Change in the Board Structure;
- Change in Sub-Committee of the Board;

Corporate Governance Report

The year in review

On 12 August 2021, Zambia went to the polls at which H.E President Hakainde Hichilema was elected as the 7th Republican President.

This change of Government brought in some changes in Corporate Governance with the Managing Director and the Director Investment & Finance not sitting on the Audit & Risk and Finance & Investment Committees anymore. Further Executive Directors will no longer be part of any of the Board Sub-Committees. However, Directors will be invited to attend Sub-committee meetings as need arises, with exception of the Managing Director who will also sit on the Technical Committee.

During the year, the company amended its Articles of Association to align with IDC Group's Articles.

Board Changes

The Shareholder (IDC) on 12 October 2021 dissolved the ZESCO Board of Directors and appointed a new Board on 1st December 2021 chaired by Mr. Vickson Ncube. The Board was mandated to improve customer service delivery, financial and operational sustainability of the corporation to deliver value to the Shareholders.

The Non-Executive Directors (NED) are appointed from diverse professional backgrounds. The Managing Director is the only member of the Executive Directors (ED) that sits on the Board.

The following are the Board members;
- Mr. Vickson Ncube – Board Chairman
- Mrs. Edna Mwala Mudenda – NED;
- Mrs. Chikondiwe Mumba – NED;
- Dr. Jolly K. Kamwanga – NED;
- Mr. Charles Kaisala – NED;
- Mr. Emmanuel Gardner – NED; and
- Mr. Victor B. Mapani – ED.

Board Activities

As part of the induction program the Board visited some key installations of the corporation, amongst them, Victoria Falls Power Station, Kariba North Bank Power Stations and Kafue Gorge Power Stations. Site visitations will continue in 2022.

Board Evaluation

The criteria for Board evaluation will be set at the beginning of the Year for each of the Board members. This evaluation will be conducted at the end of each financial year.

Key Board Decisions

The new Board at its first special Board meeting approved the following;
- the organization structures;
- staff audit.

Board Subcommittee

In order to enhance performance of the Board, the Administration, Legal and Human Resources Committee was split into Human Capital Development, and Legal and Administration committees respectively. Below are the Sub-committees to which the Board delegates it's authority:
- Audit and Risk;
- Investment and Finance;
- Technical;
- Human Capital Development; and
- Legal and Administration.

Below are the responsibilities of the new Human Capital Development committee:
- Review of the Organization Structure and recommend to the Board any changes;
- Review of the Conditions of Service for Employees and alignment to relevant laws and making recommendations to the Board for any changes;

Board Profiles

Mr. Vickson Ncube

Professional Chartered Accountant with a strong business acumen and service ethic, thriving in highly dynamic and changing environments having served as CEO in various organizations in both public and private sector.

Mr. Charles Kaisala

Registered engineer with vast experience in power systems having worked in the industry for over 30 years.

Mrs. Edna Mwala Mudenda

Banking and Finance specialist having held various senior management positions at the Central Bank of Zambia.

Mr. Emmanuel Gardner

Held senior management roles in Barlow world and Bell equipment with extensive Board membership experience

Mrs. Chikondiwe Mumba

Seasoned business Entrepreneur with experience in managing various businesses and has extensive work experience at managerial level.

Mr. Victor B. Mapani

Seasoned Registered Engineer with vast experience in the power sector having served in various senior management positions both in Zambia and abroad.

Dr. Jolly K. Kamwanga

Senior research consultant with vast experience ranging from Monitoring and Evaluation, Public finance and human capital development amongst other skills. He has extensive work experience with development organizations like **UNAIDS, UNDP, INESOR and GiZ**.

Corporate Leadership Team

Organisation Changes

The Board approved the change in organization structure aimed at improving service delivery. These changes resulted in the formation of new directorates such as Planning and Projects and merging of Distribution and Customer Services.

Corporate Leadership Team (CLT) is charged with running of the Company's day to day operations. The CLT is led by the Managing Director who is supported by the following Directorates:

- Power Generation;
- Transmission, Operations and Power Trade;
- Distribution and Customer Services;
- Planning and Projects;
- Human Capital and Development;
- Corporate Support Services;
- Investment and Finance; and
- Legal Services and Company Secretary.

CLT Profiles

Was appointed Director Power Generation, prior to his appointment Wesley was working as a Project Director for Kafue Gorge Lower, a wholly subsidiary of ZESCO.

Eng. Wesley Lwiindi
Director Power Generation

Was appointed Director Human Capital Development, Maxwell is a consummate HR practitioner who worked for ZESCO at senior management level and later plied his trade in various Financial Institutions at Senior Management levels.

Maxwell Saya
Director Human Capital Development

Was appointed TOT Director, Justin previously worked for ZESCO holding various senior positions in Generation and Transmission and at the time of his appointment was the Chief Executive of Lunsemfwa Hydro Power Company.

Eng. Justin C Loongo
Director Transmission, Operations and Trade (TOT)

Was appointed Director Corporate Support Services, Matembo worked at ZESCO as Legal Services Manager and prior to her appointment she was Head legal and Company Secretary at ECO Bank Zambia.

Matembo Lisimba
Director Corporate Support Services

Was appointed Planning and Projects Director, Gyavira worked for both Botswana Power and ZESCO at various senior management levels.

Eng. Gyavira M Bwalya
Director Planning and Projects

Was appointed Director Investment and Finance in 2019, Emmanuel worked for Standard Chartered Bank at Senior Management Level prior to his appointment in ZESCO.

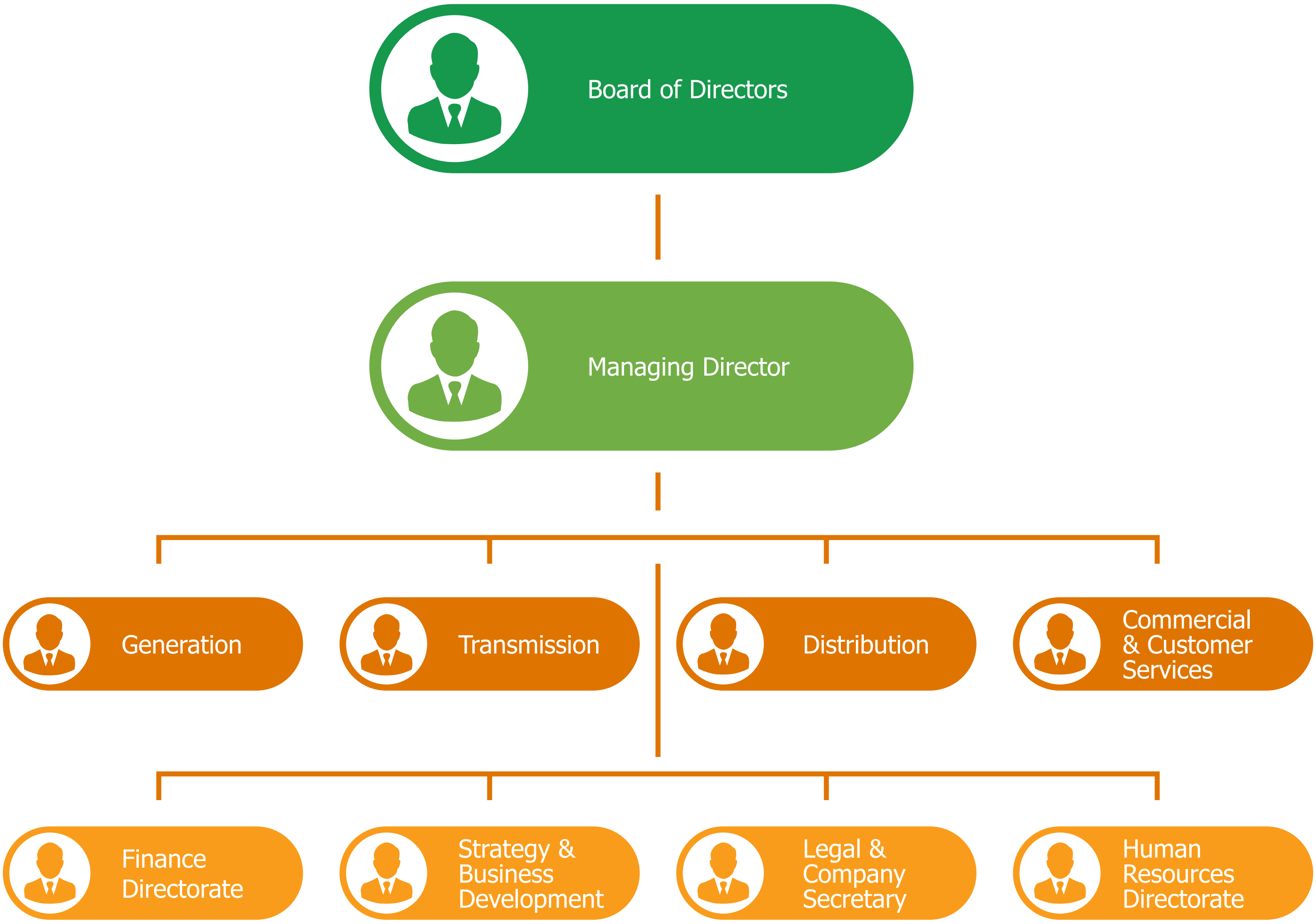
Emmanuel M. Banda
Director Investment and Finance

Was appointed Director Distribution and Customer Services, prior to his appointment Peter worked as a Consultant but before then worked as Divisional Manager in ZESCO for Northern Division under Distribution Directorate.

Eng. Peter Chamfya
Director Distribution and Customer Services

Was appointed Director Legal and Company Secretary in 2016, McRobby has worked at Senior Management Level before being appointed in his current Portfolio

McRobby V. Chiwale
Director Legal and Company Secretary


Board of Directors
Managing Director
Generation
Transmission
Distribution
Commercial & Customer Services
Finance Directorate
Strategy & Business Development
Legal & Company Secretary
Human Resources Directorate

Strategy

The Board reviewed and re-validated the Company's core ideology which comprises of the Mission, Vision and Values. This resulted in developing a 10-year rolling strategic plan.

The following core ideologies have been adopted;

Mission Statement

To provide efficient, innovative, and excellent electricity services and energy solutions to our local and international customers.

Vision

To be an effective provider of reliable and environmentally sustainable electricity services to all our customers by 2032.

Values

Integrity
We uphold fairness, accountability and truthfulness in our actions. We conduct ourselves in an honest and ethical manner.

Customer Centricity
The customer is our focal point in our delivery of excellent services. We will care for, understand, respect and support our customers.

Innovation
We will continuously keep abreast with, develop, implement and use modern technology in our business.

Teamwork
We endeavour to work as a team in our quest to serve our customers through understanding, respecting, and supporting one another (Team Work Works).

Safety and Environmental Sustainability
We shall adhere to the highest safety practices and endeavour to protect our stakeholders from danger, risk or injury in all our operations. We shall apply business solutions that enable us to grow in a manner that has the least adverse effects on the environment.

Building Blocks to Financial Sustainability

Under the 10-year Rolling plan, the corporation formulated Five (5) Strategic Objectives to enable it achieve its vision and mission as below:

- To achieve customer satisfaction, win customer confidence and loyalty;
- To be a financially sustainable organisation that balances the needs of its stakeholders;
- To expand its Generation, Transmission and Distribution systems guided by a clear Integrated Resource Plan;
- To enhance the maintenance programme for Generation, Transmission and Distribution systems; and
- To align human capital to achieve business objectives.

The Strategic Objectives are condensed into four strategic focus areas which are a must win for ZESCO:

a. Improve customer service delivery: There are several initiatives around this focus area, such as improving the:

- Customer application process;
- Connection of new customers;
- Customer service centres; and
- Faults management system to reduce faults resolution time, and; implement customer management systems with integrated analytical capabilities to measure customer experience.

b. Strengthening the core business: the following are some of the initiatives developed under this focus area:

- Increase generation capacity;
- Increase the transmission transfer capacity;
- Expand and reinforce the distribution network;
- Improve the System Average Interruption Duration Index (SAIDI);
- Improve System Average Interruption Frequency Index (SAIFI); and
- Improve Customer Average Interruption Duration Index (CAIDI).

c. Optimise human capital: the following are some of the initiatives developed under this focus area:

- Carry out a staff skills audit;
- Review organisation structure;
- Develop capacity building training programs;
- Develop a reward system for performance management;
- Implement the performance management system and develop individual score cards; and
- Enhance staff retention schemes.

d. Debt, Revenue, Cost and Working Capital management: This focus area will focus on sales growth, solvency, profitability and liquidity improvements.

Outlook

The 10 year rolling Strategic Plan (the Plan) will drive the organisation from its current position to an envisaged future state. The new strategic direction aims at improving overall business performance for the Corporation, to steer it back into a viable national power utility focused on efficient service delivery.

Organisation Risk and Uncertainty

The Enterprise Risk Management (ERM) Framework is a process that is anchored on our ability to identify and manage risks that have the potential to impact the execution of ZESCO's Ten (10) year rolling Strategic plan.

The ERM's main goals are as follows:

- Outline a clear approach to Risk Management,
- Protect and enhance enterprise value through effective decision-making, and efficient application of the Risk Management framework.
- Strategic alignment by ensuring Risk Management is integrated into ZESCO's operations.
- Focus on mitigating, transferring, avoiding and accepting risks based on their likelihood and impact to ZESCO's objectives.
- Enhance resilience though helping ZESCO anticipate and prepare for potential risks and disruptions.

The ERM is divided into four main parts, as indicated below, these support and maintain risk management across the entire company:

1. **Risk Management Policy Direction**
   - The Board sets a Risk Appetite.
2. **Risk Management Systems**
   - Developing a risk-aware environment,
   - Reporting and Monitoring of risk
3. **Risk Management Process**
   - Compliance to ISO 31000
4. **Risk Management Governance Structure**
   - compliance to best practice

Risk Management Policy Direction

The policy assigns accountability for risk management and outlines ZESCO's approach to risk management. It guarantees that every Business Unit (BU) handles risks in an efficient manner that is suitably recognized, accessed, and shared.

Enterprise Risk Management System

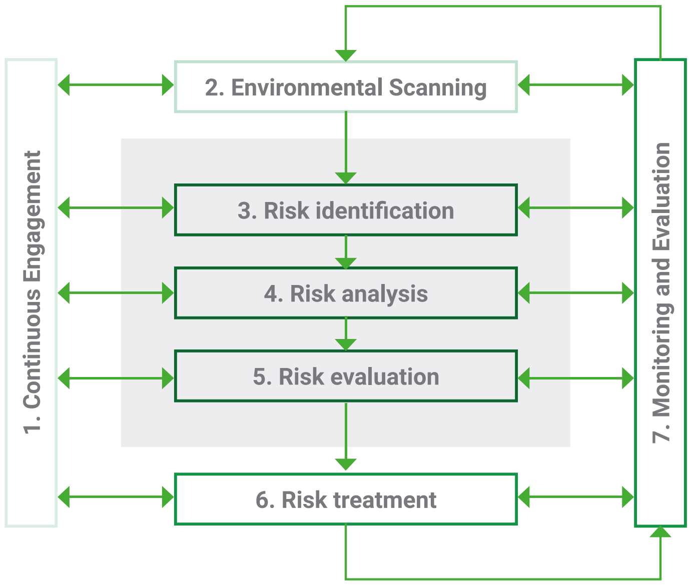
This a critical component of an effective risk management framework with the following forming the system;
a. Risk Management Culture – refers to systems of values and behaviors that establish how an organization addresses current and future risks.
b. Tools and Templates – These are used in the implementation of ERM.
c. Risk Reporting – defines the framework for communicating risk information.
d. Risk Evaluation and Review –refers to a review of risk management capability and governance system.

Risk Management Process

The current approved ERM framework has been expanded to a seven-step Risk Management Process by including two cross-cutting components. These are

- communication and consultation, and
- monitoring and review.

Below is a Seven-step risk management process, Steps 2 to 6 are sequentially implemented with steps 1 and 7 components existing at each stage of the five stages in the risk management process.



Risk Management Governance Structure

The Board Committees
The Board sets the risk tone for the organisation; It is responsible for developing a risk management policy and setting risk appetite.

Corporate Mangement
They are responsible and accountable for development and implementation of ERM Strategy.

Operational Business Units
These are responsible for the day-to-day risk management through policy implementation, supervision, and management of the Risk Management process.

The Board

The board's role is to ensure that the organization has an effective and efficient risk management strategy, and establishes the risk tolerance that guarantees adherence to strategic goals and objectives.

Corporate Leadership Team

They are responsible and accountable for the development and implementation of the ERM Framework.

Business Units

Our Business Units(BUs) are responsible for the day-to-day risk management through policy implementation, supervision, and management of the risk management process.

Risk Categorization

Our risks in broad terms are broken down into six major categories,

Strategic	Some of the key risk we are observing under this category are Political, Reputation, stakeholder Management risk and strategy execution
Financial Risk	Some of the key risk we are observing under this category are Financial Processing Risk, FX Risk
Safety, Health and Environment	Some of the key risk we are observing under this category are Climate Change Risk
Regulatory Risk	Some of the key risk we are observing under this category are Regulatory Risk, legal, Regulatory and Ethical standards Compliance
Operational Risk	Some of the key risk we are observing under this category are Cyber Security and System Resilience, Asset Management Risk

Our Key Risk

Our key risk include risks and opportunities that have a direct potential impact on revenue, liquidity, assets, strategic objectives, near- to medium-term business plans, and stakeholders.

Risk description	Potential Risk Impact	Risk Mitigation
1 Climate Change risks I4,L4 : 16 Changes in climatic conditions such as droughts, excessive temperatures, and flash floods are heavily impacting both the local and regional business landscape.	The Corporation's electricity generation business is predominantly hydro and is susceptible to the effects of climate change. This can affect our overall operations at the various water storage reservoirs, which impacts the generation of electricity.	In a quest to optimize water use within the same river basin, ZESCO has put the cascaded generation strategy into practice to lessen the consequences of climate change. The plan entails the construction of Hydro Power Plants spread at different points across the same river basin to maximize water use and boost generation capacity. The model has been implemented on the Kafue River basin which initially had 990MW and now has the following additional investment: ITPC-120MW, KGLPS – 750MW. This will bring the total installed capacity on the Kafue River Basin to 1,860MW The corporation has created a fully functional Renewable and Research business unit to spearhead the generation mix diversification by bringing on board renewable generation sources such as solar, wind, geothermal, etc The diversification of the generation mix is key to the sustainability of ZESCO's business model.
2. Cybersecurity threat and System Resilience I4, L3 : 12 Risk of Cyber security, IT systems resilience, IT system internal misuse, and business continuity	Some potential risks that can be associated with this risk type are; • Information Breaches (hackers and viruses), • Failure of the system to cope with peak customer demand. • Disaster disrupts the IT infrastructure. • Disruption of Business and Operations processes that are anchored by ICT systems.	Information System (IS) security underpins our ability to achieve various strategic objectives. Management has continued to invest in cybersecurity systems, to enhance the organization's capability to intelligently monitor and react to cyber threats. The following systems and tools have been deployed to mitigate the risk; Security Operations Centre (SOC), Endpoint Detection and Response (EDR), Mobile Device Management (MDM), Data Loss Protection (DLP), and Network Access Control. Further, management continues to sustain its IT Infrastructure and Solutions through its consistent investments and adapting systems and infrastructure to current business needs. ZESCO's business continuity strategy is anchored on comprehensive disaster recovery plans in compliance with ISO 27001.
3. Safety, Health, Environment (SHE) I4,L2:8 Risk of harm to our customers, employees, third parties, and failure to protect the environment in which we operate.	Our operations have the potential to result in personal and environmental harm. Significant SHE events have regulatory, financial, and reputational repercussions for our business.	Management has embraced the SHEQ Management Systems as part of its corporate culture through its policies, standards, and procedures that ensure that employees, customers, and other third parties are protected. ZESCO has successfully maintained its ISO Certifications ISO 9001, 14001, and 45001. Having Power System operators who are authorized to carry out switchings is key to sustaining the organization's safety culture. As an incentive, management has set up a one-off incentive scheme aimed at motivating and rewarding technical staff who become system-authorized. Management ensures that all major projects with significant environmental footprints comply with Zambia Environmental Management Authority (ZEMA) requirements i.e. Approved Environmental Impact Assessment (EIA) reports and also ensures the Project Affected People (PAPs) are compensated. SHE is a part of our value system in which management has committed; "We shall adhere to the highest safety practices and endeavour to protect our stakeholders from danger, risk, or injury in all our operations. We shall apply business solutions that enable us to grow in a manner that has the least adverse effects on the environment".

Risk description	Potential Risk Impact	Risk Mitigation
4. Asset Management Risk I4,L2:8 Risk of failure to effectively and adequately undertake asset management activities such as asset capture, maintenance, network reinforcements, and expansion.	Failure to effectively undertake asset management could lead to asset underperformance resulting in network failure, increased unplanned outages, network overload, reduced asset useful life, loss of revenue, and customer dissatisfaction.	Our approach to asset management is enshrined in our strategic objective "To have an effective maintenance regime for Generation, Transmission and Distribution systems." The Technical Sub Committee of our Board reviews and approves the operating directorates' (generation, transmission, and Distribution) quarterly reports. These technical reports include but are not limited to, information on core asset operations, maintenance, and projects such as; • Maintenance activities • Planned and Unplanned Outages • Investment in new assets
5. Operation Technology 2/4 Risk of unavailable and unreliable Operation Technology (OT) systems such as SCADA, Network Manager, Distribution Management Systems etc that are deployed to aid network operations.	ZESCO's value chain electricity infrastructure is automated and has placed significant reliance on the Operational Technology infrastructure used in managing the organization's core operations. Its failure would result in economic, financial, and reputational impact on the company.	• Management ensures that we have continued investments in reliable network automation solutions in line with industry best practices. • Ensuring OT Systems integrity by conducting annual expert system audits, security reviews, and patching to ascertain and sustain the operational integrity of our systems.
6. Political and Legal Risk 3/3 These risks arise from changes in the political and legal environment of the business such as changes in laws, governance structure, and policies.	Key changes in the legal framework governing the Electricity Supply Industry (ESI) may have the potential to bring changes to the ESI. There is a risk that these changes in the Legal and Policy framework have the potential to impact ZESCO's operations and business environment.	The following are some of the mitigations for the risk: • Ensure we actively participate in the legislative process through lobbying, and making submissions during law development stages. • Ensure our legal team continuously reviews and identify areas where the business can take competitive advantage using the existing framework.
7. Stakeholder Management Risk 3/3 The risk of failure to manage healthy relationships with stakeholders can impede the achievement of business goals and objectives.	Effective stakeholder management is critical for attainment of various key strategic objectives such as: • Financial Sustainability – Government, Regulator, Financiers, Communities, customers, employees, ZAM, ZNFU and Chamber of Mines etc. • Expand the Generation, Transmission, and Distribution Systems – Government, ZEMA, NWASCO, Communities (Persons Affected by Projects) and Contractors etc. • Human Capital Optimisation – Training Institutions, Labour Unions and Employees. • Health and Safety - Stakeholders being Community, Employees and Government.	In 2021, Corporate Leadership undertook many stakeholder and customer engagements based on various activities, such as Customer interactions, Safety and Product awareness, sensitizations, and Project updates. The following are some of the activities undertaken: • Management hosted Facility Tours for shareholders, community leaders, and the media at facilities such as Kafue George Lower Power Station commissioning and other key ZESCO Infrastructure. • Public participation using TV and radio interviews, social media interactions, roadshows, etc. as a way to interact with customers and communities. • Corporate Leadership Team (CLT) held countrywide employee town hall meetings and Labour union engagements as part of internal stakeholder engagement.

Risk description	Potential Risk Impact	Risk Mitigation
8. Regulatory Risk - 2/3 All Electricity tariff changes in domestic and wholesale markets are subject to regulatory approval.	The non-cost-reflective tariff in the ESI implies that there is a disparity between the price paid by consumers and the cost of obtaining electricity from Independent Power Producers (IPPs). There is a risk that failure to approve ZESCO's annual tariff applications will derail the plan to migrate to cost-reflective tariffs, further constraining ZESCO's cash flow position..	• Supporting the completion of the ESI cost of service study which is expected to provide a migration path towards attaining cost-reflective tariffs. • Engaging IPPs to review tariffs. • Continually engaging the stakeholders concerning tariff reviews.
9. Strategy Delivery 2/3 The risk that changes in the macro-environment may render our strategy ineffective.	Successful delivery of our strategy requires serving customers, managing and building infrastructure in a way that satisfies our stakeholders. Therefore failure to invest in appropriate responses to changing markets and competitive business environments, and/ or build the necessary infrastructure that enhances our capabilities to compete, has the potential to adversely impact our cash flow growth, survival, and value goals.	The Board sets and reviews ZESCO's strategy, which determines the company's strategic objective and values anchoring the business. Regular reviews are conducted to take into account changes in the competitive business environment that may affect ZESCO's ability to achieve its strategy. The Investment and Finance Committee of the board ensures we have a clear financial strategy to finance our strategic initiatives and provides oversight on corporate Leadership's external resource mobilization initiatives.
10. Compliance Risk I4,L1:4 The risk that non-compliance to laws, regulations, and ethics may adversely impact our operations.	Failure to act ethically or comply with legal and regulatory obligations would undermine our stakeholder trust, and lead to financial penalties and reputational damage.	As one of the measures to manage the Compliance risk, the Board and CLT have operationalized the Integrity Committee program as a corruption prevention strategy by engaging with our customers, communities and suppliers to sensitise them on ethical conduct. Our Whistleblower policy outline the corporate culture and attitude towards malfeasance such as fraud and corruption to provide a consistent corporate-wide approach to report any unethical behavior without fear or victimisation.
11. Foreign Exchange (FX) Risk I3, L2:6 FX risk exists when a financial transaction is denominated in a currency other than the domestic currency of the company.	Most of ZESCO's obligations and receipts are in foreign-denominated currencies. The kwacha to dollar exchange movements have the potential to affect Cashflow, Profitability, and attainment of electricity cost-reflective tariffs.	• ZESCO hedges against foreign exchange movements by matching its foreign-denominated receipts with foreign-denominated obligations. • • Further, migration of Customers above 5000kVA from the kwacha tarrif regime to a dollar regime will help increase the foreign denominated inflows which can the used to settle foreign denominated obligations.
12. Major Public Health crises and Global Pandemics I3,I4:12 The Risk that an occurrence of a global public health crisis will affect our ability to deliver a service, and the operations.	• Spread of infectious diseases (Global pandemic e.g. Covid-19) • Increased default risk for sensitive and Bulk Supply Agreement (BSA) customers and obligations. • Inaccurate and or major changes in Budget assumptions • Loss of Staff	ZESCO has invested in various IT platforms that will enable business continuity in the event of Global Pandemics that disrupt our normal work arrangements. These platforms exist to support our employees in performing day-to-day office operations remotely and ensure our customers have access to a variety of distribution channels for our products and services.

Value through Asset Creation

Asset Creation

In our quest to continue serving our customers in line with the 3Es, ZESCO guided by its investment policy continues to invest in new infrastructure and also uprate and improve existing infrastructure.

The investment Policy also provides concise and well-formulated guidelines on all major investment decisions that ZESCO undertakes.

Currently, across the value chain, ZESCO has over 1850 MW of installed Generation capacity and over 15,000 kms of Transmission and Distribution lines.

This is in addition to other Technological and support assets not directly linked to power generation.

In the period under review, the following Projects were undertaken across the value chain in the quest to meet the ever-growing demand for electricity.

Generation capacity increase: this covers only projects that will add to the installed generation capacity

Kafue Gorge Lower 750 MW Hydropower Project

The project is located in the southern part of the country on the Kafue river basin, downstream of Kafue Gorge Power Station.

The objective of the project is to increase installed capacity and optimise the water usage on the Kafue river basin by cascading the power plants. When the plant reaches commercial operation the installed capacity on this waterbody will be 1,860 MW.

Additional capacity
KGL 750MW
Kalungwishi River 247MW
Lusiwasi Upper 76MW
Chishimba 4.8MW

Overall project completion in the period under review was estimated at 94%.

Lusiwasi Upper 15MW Hydropower Project

The objective of the project is to increase installed capacity and improve the quality of supply in the Northern circuit. The project is also aimed at enhancing geographical diversification as most of ZESCO Plants are in the Southern part of the Country.

During the period under review, the project was completed and commissioned.

Lusiwasi Lower 86 MW Hydropower Project

This project is located in the northern part of the country on the Lusiwasi river basin.

The objective of the project is to increase installed capacity and improve the quality of supply in the Northern circuit. Besides the geographical diversification objective, the project also hopes to optimize the water usage by cascading plants on the same waterbody. Initially, the Lusiwasi river basin only had 12MW installed capacity which will increase by over 88MW.

The project is currently on going.

Kalungwishi River project

The objective of the project is to increase installed capacity and improve the quality of supply whilst diversifying from the Southern circuit. This project involves the development of the 151 MW Kundabwika Falls and 96 MW Kabwelume Falls hydropower projects on the Kalungwishi River. This will add an additional 247 MW to the national grid.
During the period under review, the project feasibility studies had just been completed and signed off.

Rehabilitation and Up-Rating; this covers projects whose maximum power level was increased

Chishimba Falls Power Station (CFPS) Rehabilitation and Uprating to project

This is a 14.8 MW project located in the northern part of the country on the Luombe river basin. The project will rehabilitate and uprate the existing plant from 10MW to 14.8MW.

The objective of the project is to increase installed capacity and improve the quality of supply in the Northern circuit. The project is also aimed at achieving geographical diversification as most of ZESCO Plants are in the Southern part of the Country.

During the period under review, the funder gave a "no objection" for award of tender for consultancy services in the third quarter. The procurement of an EPC contractor is currently underway.

Renewable energy

In ZESCO's quest to diversify, two Renewable energy projects were under taken during the period under review. Below are the updates on the two:

Kanona 100 MW Solar Photovoltaic (PV) Project

The objective of this projects is to increase national electricity generation capacity by exploiting the Solar power potential on the proposed Kanona PV site area in Serenje and also to improve the energy mix of the country's electrical power supply.
Feasibility studies had not yet been concluded by the end of the period under review.

150 MW Wind Power Plant

The objective of this project is to increase national electricity generation capacity by exploiting the Wind power potential on the proposed Chanka site area in Nakonde. ZESCO was yet to conclude the Survey works for power evacuation from Chanka to the proposed Nakonde substation by end of 2021.

Transmission System

The Transmission system comprises of infrastructure used to evacuate power across Zambia. ZESCO's transmission system is interconnected with other utilities Systems in the Southern African Power Pool (SAPP).

This report highlights cumulative progress achieved in the period under review for projects at different stages of Implementation categorized as:

1. System Reinforcement Projects to improve the power transfer capacity and system operational efficiency.
2. Grid Expansion Projects to expand the system to connect businesses and parts of the country that are not on the electricity Grid.

Listed are some of the projects that were at different stages of Implementation:

Project	Description
System-wide reactive power compensation	This project is aimed at carrying out system studies to determine the number and types of reactive power compensation needed in the system. In the period under review, a business case proposal was submitted to ZESCO and an MOU for development intent was being finalised by close of the year.
Kasama – Nakonde	This project is part of Zambia Tanzania Kenya (ZTK) whose scope included the construction of 387 km of 330 kV line from Kasama to Mporokoso to Nakonde and associated substations to be constructed in Mporokoso and Nakonde. The project aims to secure power supplies to the Muchinga, Northern and Luapula Provinces. In the period under review, the contractor had carried out some preliminary works such as surveys of the transmission lines and geotechnical investigations.
Pensulo-Mansa Transmission	The project is aimed at improving transmission capacity to Luapula province that will support the planned mining and agricultural loads. The scope involves construction of 300km of 330kv transmission line from Serenje to Mansa with a 330/66 kV substation. This will also reinforce the local sub transmission network.
Evacuation Of Power From Ndola Energy Phase II	This project is aimed at power evacuation from the extended Ndola Energy HFO power plant. The scope includes construction 1.3km of 66kv transmission lines, rehabilitation and upgrading of Bwana Mkubwa 66/33kv substation. This project was completed with only works at Ndola Energy and Mushili 66/11kV substation yet to start in the period under review.
Second Kabwe-Pensulo 330kv Transmission Line	The project is part of the Zambia Tanzania Kenya whose scope included the construction of a 300kM 330kV Transmission line from Kabwe Stepdown Substation to Pensulo Substation and associated Substation works. As at the yearend, 99% of the foundations and 92% of the tower erection were completed respectively. The project is expected to be completed in 2024.
Msoro And Kabwe Step Down Reactor	The objective of the project is to provide means of voltage control at Kabwe step down and Msoro substations on the 330Kv network. The contract to commence the project became effective on 26 November 2021 after ZESCO fulfilled conditions precedent to contract effectiveness.
Nambala-Kalumbila Transmission Line 330kv Power Reactors	The project involves increasing the reactive power compensation provided on the Nambala-kalumbila 330kv double circuit transmission line to the extent of being able to allow energization of both 330 kv transmission lines at the same time. The project also involves construction of an 18km 33kV distribution line from Nambala to Mumbwa town substation. During the period under review, all reactors at Nambala and Kalumbila substations were commissioned whilst stringing of the erected poles for the Mumbwa-Nambala 33kV line was in progress.
Reinforcement Of Supply To Sanje (Mumbwa Zaf) 33/11kv Substation	The objective is to increase the transmission line transfer capacity by operating the Nampundwe – Sanje Line at its design voltage of 88kV and subsequently increasing the overall access to electricity to Mumbwa and surrounding areas. The project scope Involves uprating Sanje from 33/11kV to 132–88/33/11kV Substation and Establishing a 132 – 88kV bay at Nampundwe Substation. The scope will also include development of a 33kV distribution network to ensure continuity of supply to existing customers. During the period under review, Sanje 132-88/33/11kV and Nampundwe 88/33kV substations were 70% completed with pre-commissioning tests with works on the 33kV line complete.
Connection Of Lundazi And Chama To The National Electricity Grid	The objective is to connect Lundazi and Chama to the National Grid. Currently, Lundazi and Chama are supplied by ESCOM Malawi and also supplemented by Diesel Generating Plants. Frequent and prolonged interruptions have necessitated this project. The main scope of the project is to construct substations and 132kV (325kM) Transmission Line from Chipata West Substation to Lundazi and Chama. The scope also includes developing a distribution network comprising of 185kM of distribution lines with various transformation points. The completion progress status for the 325kM Transmission line is over 99% and the associated substation works are also over 90%.
Kasompe Bulk Power Supply	The objective is to increase capacity and security of supply to Chingola district. The scope includes establishing a new 52MVA, 66/11kV kasompe substation complete with 11kV switchboard and construction of 25km of 132kV line. During the year, the substation was commissioned.
New Mumbwa 33/11kv Substation And 33kv Line From Nambala Substation To Kabalwa	The project's objective is to construct a new urban type 33/11kV substation whose scope of work involves includes construction of a control room, Installation of 1x 10/15MVA 33/11kV Transformer and Construction of 37.6km of a 33kV line from Nambala to Kabalwa via Chibuluma and Chipa. The project was completed during the period under review.

Distribution Systems

The distribution system comprises infrastructure used to support the utilisation of electricity by the various end-users in ZESCO's domestic customer portfolio. Its stability and reliability is key to achieving efficiency, effectiveness and excellence.

Distribution system asset creation strategy segments our projects into two categories i.e.

- **Distribution System Reinforcement Projects** - to improve the power transfer capacity and system operational efficiency and;
- **Distribution System expansion projects** - to connect businesses and parts of the country that are not on the national electricity Grid.

System expansion projects

Increased Access to Electricity Services (IAES) Project

Jica distribution lines phase II scope

The objectives of this project are to increase the access to electricity, through expansion of the network in the rural distribution network, and to provide subsidies to low-income households in all the provinces to increase new electricity connections.

The IAES Project involves grid expansion in Northern, Luapula, Copperbelt and North Western provinces under the JICA distribution lines phase II. The project scope includes 652km of High Voltage and Low Voltage distribution lines and Sixty Six (66) transformation points.

World Bank Funded ESAP

The Project is being implemented jointly by REA and ZESCO Limited and seeks to improve access to electricity in the rural areas by subsidizing the cost of Households and SME connections.

As at end of the period under review, 40,311 customers cumulatively were successfully connected under this project.

LTDRP LAST MILE

The project aims to Integrate the outcome of the LTDRP Project into the existing Lusaka Distribution Network and will contribute to the Government's objective to increase the national electrification rate from the current 25% to 66% by the year 2030.

High density area such as Mandevu, Ngwerere, Mtendere East, Nkoloma, Garden, Chawama, John Howard, and Chainda townships are the targets to increase their access to clean, reliable and affordable energy.

During the period under review, the project was on going.

Lusaka Transmission Distribution Reinforcement Project (LTDRP) in execution

Below is the scope of the project;

Project
Construction of Waterworks Substation (IDA)
Replacement of 33kV Underground Cables (EIB)
Construction of 132kV Substations at Roma Substation, Leopards Hill Substation, Lusaka West Substation and Industrial Substation – Tender 4 (IDA)
Construction of 132kV Lines between LS MFEZZ - Water Works, Leopards Hill – Roma, Lusaka West – Industrial and Industrial – Coventry
Construction of 132/33/11kV Chilanga Substation and Switching Stations
Construction of 132kV Roma – Lusaka West Overhead Line
Construction of 132/33/11kV Avondale Substation and Switching Stations
Construction of 132kV Overhead Lines between LS MFEZ and Chilanga
Construction of 132/11kV Chawama Substation and Switching Stations
Construction of 132/11kV Ibex Substation and Switching Stations
Construction of 132/11kV Bauleni Substation
Upgrade of 33/11kV Woodlands Substation

Government Assurance Projects

These are distribution projects executed by ZESCO on behalf of the Government of the Republic of Zambia. The projects are mainly undertaken in rural areas to electrify Schools, Rural Health Centres, Community Centre, Chiefdoms, and other rural development projects that may require electricity.

Below is are the government assurance projects under taken in 2021;

S/N	Project Description
1	Chief Chisunka
2	Chimpempe, Chief Kabanda & Surrounding Areas
3	Chief Matanda's Palace and Surrounding Areas
4	Electrification of Chief Makumbi and Surrounding area
5	Electrification of Chief Ishina in Zambezi District
6	Electrification of Chief Kalunga in Kabompo
7	Electrification of Chief Munsele and surrounding areas
8	Electrification of Chitokoloki Mission
9	Electrification of Manyinga District, Kayombo Secondary School, Chief Chiyengele Palace
10	Electrification of Indeco Compound, Phase A, B and C (Grass Thatched Houses)
11	Chitimbwa & Vyamba - Mbala
12	Chisanza & Kalambo Falls - Mbala
13	Chief Mukupa Kaoma
14	Chief Zombe & Kaseshya Post – Mbala
15	Chief Tafuna's Area – Mbala
16	Senior Chief Mpande & Nsokolo - Mbala
17	Electrification of Chishinga Ranch & Surrounding Areas
18	Chief Mwamba & Surrounding Areas - Mbala
19	Chieftainess Chungu & Surrounding Areas - Luwingu
20	Chief Chinakila
21	Electrification of Tungati & Chaba – Luwingu
22	Electrification of Shibwalya Kapila, Kaputa mission and surrounding areas
23	Connection of Mafinga District
24	Electrification of Kabangwe secondary school and the surrounding areas
25	Connection of Nalolo District
26	Connection of Mitete District
27	Chief Shezongo A palace - ITT
28	Chief Shezongo B palace - ITT
29	Chief Shimbizi palace - ITT

Corporate Support Services

Civil Engineering

CES Division provides a leading role in consultancy and supervision of projects for the expansion & reinforcement of power generation, transmission and distribution infrastructure to ensure compliance to technical specifications by Contractors.

The following are the major Corporate Projects managed under Civil Engineering Services completed or nearing completion in 2021.

- Construction of Standard ZESCO Branch Office Blocks in Chadiza, Luangwa, Mumbwa, Chitope, Mpanshya, Kaputa and Regional office in Choma
- Substation Control buildings at Chisekesi, Kalomo, Sinazongwe, Livingstone and Kalabo substations
- Civil Works for Construction of 66/33/11 kV Substation in Kalabo
- Construction of bonded warehouse and associated external works in Kasupe, Lusaka
- Construction, Supply, delivery and Installation of 60 Ton Weighbridges in Ndola and Livingstone
- Construction of an Office block, Stores building and Filling Station in Mporokoso
- Construction of additional Infrastructure for ZESCO UNITED FC Camp Site at Monkey Fountain in Ndola
- Construction of a Student and Staff Canteen, 1x2 and 1x3 classroom blocks at ZESCO Ndola Training Centre

Fleet Management

To sustain and support our operational capability the Fleet Management Unit added 114 new motor vehicles during the period under review which were distributed across the value chain.

Developing Our Human Capital Base

The strategic role of a competent and professional team is integral to the achievement of the Organization's strategic objectives.

Highlights	Improvements
• Turnover per employee of K3.2m increased compared to K2.7m in 2020 • A total of 2,573 employees underwent staff development trainings during the year compared to 1,711 the previous year	• 81% drop in training expenditure

Lowlights	Challenges
• 38 members of staff died during the year compared to 45 the previous year • 87 minor and 6 major accidents recorded • 20,605-man hours lost in sick leave • Average GWh per employee of 4 compared to 5 in 2020	• Reduced levels of staff development due to COVID 19 and financial constraints

Building and Retaining Strong Skills

Our employees remain a focal point for the achievement of strategic objectives. We continue to attach prominence to matters of recruitment, continuous professional development and retention of a skilled workforce.

These and many other initiatives are expected to improve productivity, efficiency and realize value for all stakeholders.

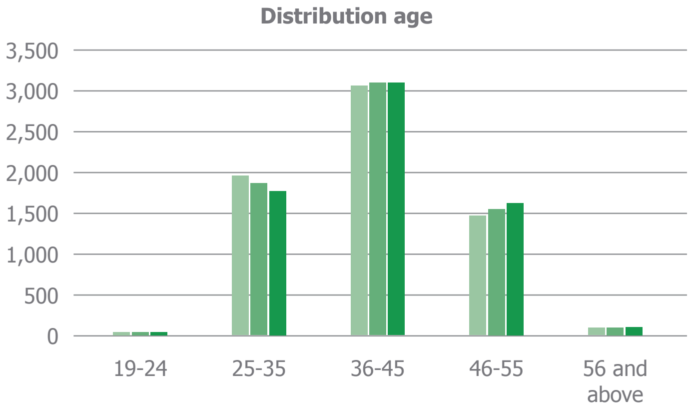
The Workforce

The Labour strength marginally increased to 6,765 at the close of 2021 compared to 6,759 the previous year. However, over 114 employees were lost through various modes of attrition such as death, resignations, dismissals and retirement. A summary of the movement in numbers over the two years is as follows:

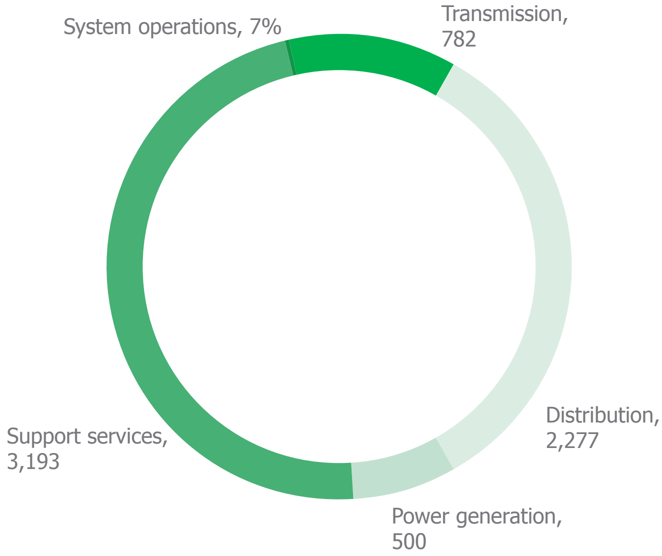
Staff Headcount	2020	2021	+/-
As at 1 January	6,740	6,759	0.28%
Add: Recruitments	263	63	-76.05%
Reinstatements	19	57	200.00%
Less: Resignations	-11	-6	-45.45%
Deaths	-52	-16	-69.23%
Dismissals	-28	-10	-64.29%
Retirements	-80	-39	-51.25%
Discharges Redundancies	-49	-32	-34.69%
Expired Contracts	-43	-11	-74.42%
As at 31 December	**6,759**	**6,765**	**0.09%**

Human Capital Profile

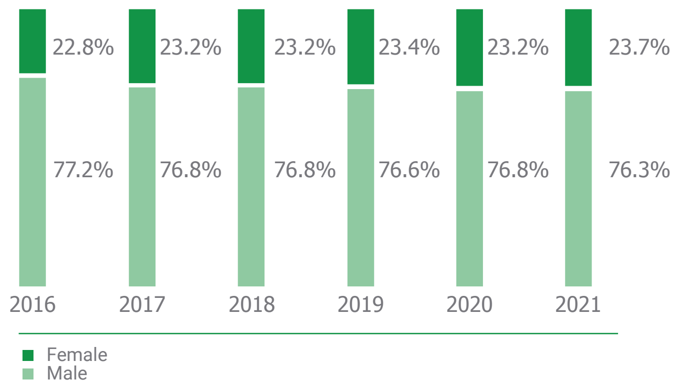
Almost half of the entire workforce consists of the 36-45 age bracket and another 25% below that age group.



Only 33% of the staff compliment are non-represented a marginal increase over the 31% the previous year.



Meanwhile the number of females in the workforce has continued to increase closing at 23.7% of the workforce as compared to 23.2% in 2020. Female members of the team have roles in Engineering, Environment, Risk Management, Litigation, Customer Service, Finance and Human Capital. This is at all levels ranging from Executive Management to the lowest levels in the corporation. The annual ratio for the past 6 years is detailed below



ZESCO has continued to embrace deliberate set of policies and practices that support the representation of women in areas in which they have been previously fewer than men such as Engineering. This as we aspire to be an equal opportunity employer as prescribed by the Equal Employment Opportunity Commission (EEOC), whose main purpose is to eliminate employment discrimination based on factors such as sex or religion. At the end of the year, more than 544 women held roles previously dominated by their male counterparts such as Engineers, Technologists, Technicians and Electricians compared to only 525 the previous year. We are confident that this number will continue to grow in coming years.

Staff Category	M	F	Total	Proportion
Management	1,509	706	2,215	33.%
Represented	3,650	900	4,550	67%
Total	**5,159**	**1,606**	**6,765**	

In 2021, 12 requests for industrial attachment and physical research where processed unlike the previous year where no requests were attended to due to COVID 19 pandemic. This exercise extended an opportunity for students to gain required work experience prior to any form of employment while research is for students to carry out workplace-based research that allows them to obtain their qualification.

Graduate Assessment Program

The Graduate Assessment Program (GAP) continued during the year and a total of 70 graduates underwent Assessment. This initiative allows graduates to be inducted into ZESCO while also applying their theory within the Industry.

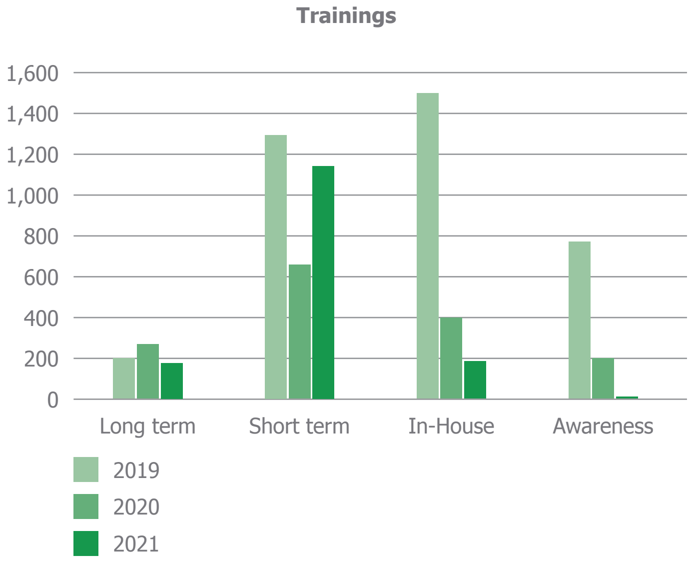
ZESCO Training Centre (ZTC)

The Training Centre is a strategic partner in providing required staff development through generic as well as tailored trainings to both ZESCO and non-ZESCO staff. During the year, 29 students were enrolled compared to 84 students the previous year under the ZESCO sponsorship program for long term courses such as Overhead Lines Construction, Cable Jointing and Electrical Fitting. The Training Centre also conducted short intensive courses for 440 employees compared to 316 employees in 2020 under the TEVETA Skills Development Fund (SDF).

A total of K26.6million was also provided in grants to the Centre compared to K24.9million the previous year.
The partnership has resulted in the development of key skills in ZESCO staff across the values chain in core and support functions and is therefore expected continue for the foreseeable future.

Staff Development

In order to ensure that our human capital base is sustainable, support is extended to staff through initiatives such as full sponsorship, paid study leave, and facilitating short courses.
During the year 2,066 employees benefited from staff trainings, an increase of 5% over the previous year with a total of K2.7million spent. This was mainly on account of an increase in the number of conferences, seminars and workshops, TEVETA SDF trainings and sponsored staff. These staff development initiatives have continued upskilling staff.



Below is the distribution of training undertaken during the year under review

Status (Nos.)	2021	2020	Diff (+/-)	% (+/-)
Full Company Sponsorship	2	105	(103)	(98)
Sponsored (ZTC)	29	22	7	32
Paid Study Leave	180	144	36	25
Un-Paid Study Leave	1	1	-	-
Capacity Building	-	684	(684)	(100)
System Based Trainings	203	445	(242)	(54)
Conferences/ Workshops/ Seminars	1,205	249	956	384
TEVETA Skills Development Fund Trainings	440	316	124	39
Total	**2,060**	**1,966**	**94**	**228**

Occupational Health

To achieve maximum productivity and efficiency, ZESCO continued to invest in the occupational health of its workforce through partnerships with private and public health institutions.

Below is a summary of some of the related key metrics over the past few years.

Occupational Health Statistics	2019	2020	2021	Diff (+/-)	% (+/-)
Average Daily Attendance	70	64	30	-34	48
Man hours lost (Sick off)	33,363	26,248	20,248	-5,643	-9
ART Membership	822	802	806	4	0
No of Deaths	15	45	38	--7	--35

The department also successfully conducted Occupational and Community Health awareness campaigns in Sikongo District, Western Province and Serenje in Central Province.

COVID 19 Response

The Wellness and Medical Services Division in conjunction with the Enterprise Risk Management Division continued monitoring adherence to set health guidelines on the prevention of COVID-19 infection at the workplace by employees as the pandemic was still very active with a surge in the number of positive cases coupled with the emergency of the Variant of Concern called Omicron with the Government officially declaring that we are experiencing the fourth wave.

During the year, a total of 1,654 employees underwent COVID-19 testing out of which 754 tested negative and 700 were positive. A total of 1,061 employees where placed on self-quarantine at their homes and 19 employees were hospitalized at COVID-19 designated facilities across the Country. Sadly, 13 employees died due to COVID-19 (MTSRIEP).

The Wellness and Medical Services Division in conjunction with Division offices has continued facilitating the disinfection exercise of ZESCO region offices and some customer service centres throughout the country, in an effort to prevent Covid-19.

Future Focus

The corporation is cognizant of the changing needs of the workforce, customers and the environment. ZESCO will continue to pursue initiatives that enhance staff productivity, develop skills and keep the workforce abreast with technological trends.

Employee wellbeing remains a priority for management and so partnerships that safeguard it shall continue for the foreseeable future.

Additionally, the harmonious industrial relationship is expected to continue as management supports employees in the execution of their duties, while ensuring they are protected from exploitation and harm.

The corporation recognizes the changes that have been brought about by COVID 19 locally and globally. To this end innovations such as virtual meetings and remote working were embraced during the year and ensured minimum disruption to service provision.

Corporate leadership remains resolute on achieving the recruitment, development and retention of skilled and competent cadre of staff. We are therefore intent on supporting our team to acquire relevant and up to date qualifications, certifications and skills to be employed across the value chain.

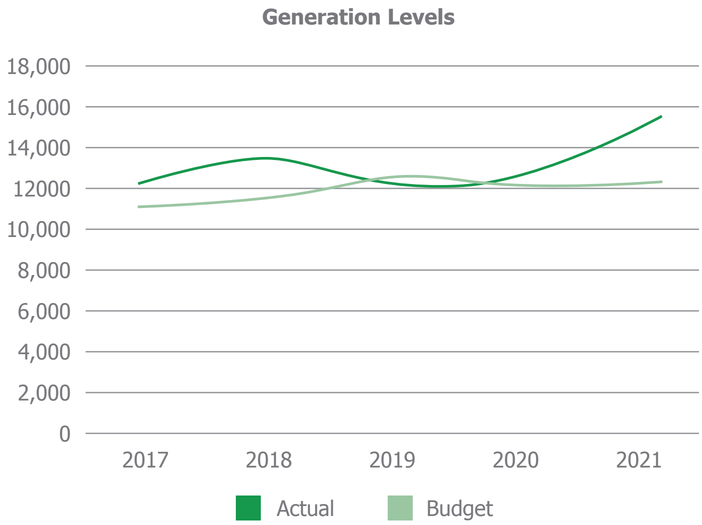
Further we have invested a significant amount of resources in the upskilling and staffing of our Occupational Health team, procured modern equipment to protect the health of our staff and continue to promote wellness activities for ZESCO staff. A healthy staff is key to the achievement of our strategic goals.

Operational Sustainability

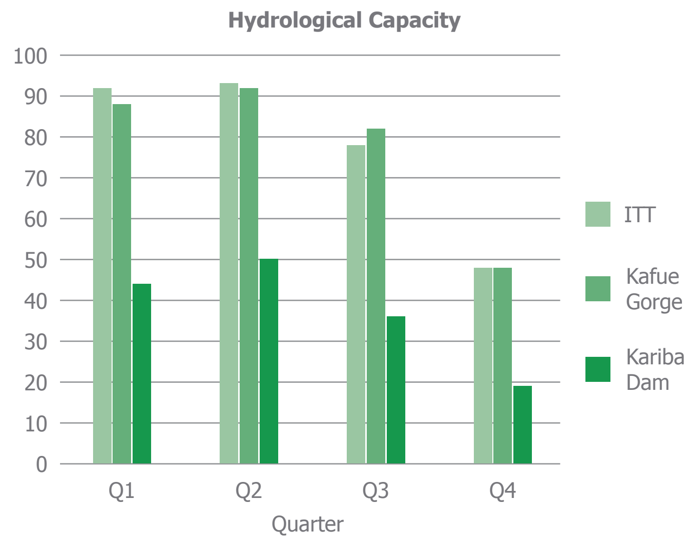
As a business, we employ numerous methods of evaluating whether we can maintain existing practices without risking future potential resources. We understand Sustainable Operations to mean meeting present needs through our operations without compromising on the ability to meet future needs. We place great value on resources such as water, marine and the general ecology around our power stations. Operating with minimal or no harm to the environment where we operate remains one of our major objectives.

Generation System Performance

Generation performance for the year was favorable at a total of 15,397 GWh generated from the Power Stations which exceeded the budgeted 12,383 GWh by 24%. This is an improvement from the 5% surplus recorded in 2020.

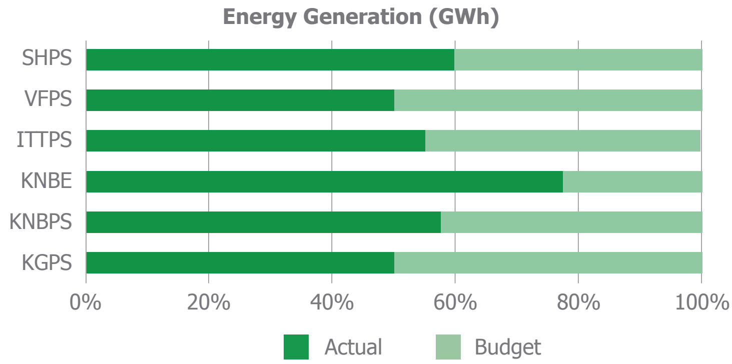


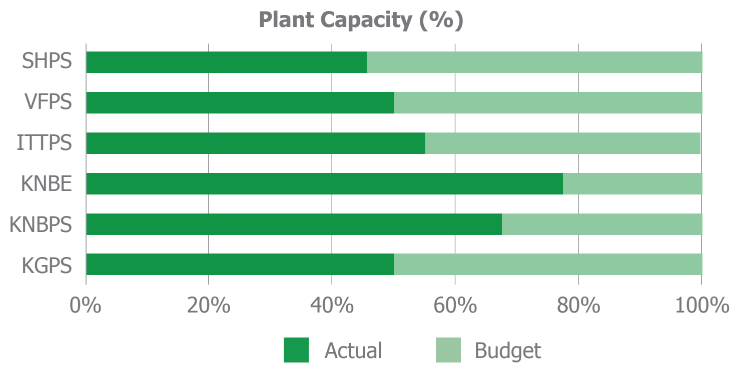
Similarly, average availability of generating plant improved to 85%, better than the 72% the previous year, with an average Capacity Factor of 55% (2019: 50%). In general, there was sufficient water to generate firm power and minimal quantities for the generation of secondary power at Kafue Gorge Power Station. Water utilization at the Kariba North Bank Power Stations, exceeded the annual allocation from the Zambezi River Authority closing at 157% of the allocation. Adequate water for all-out power generation was available at Victoria Falls power station and the Small Hydro power stations during the year, while the reservoirs recorded significant drops towards the end of the year due to delays in the onset of the rainy season.

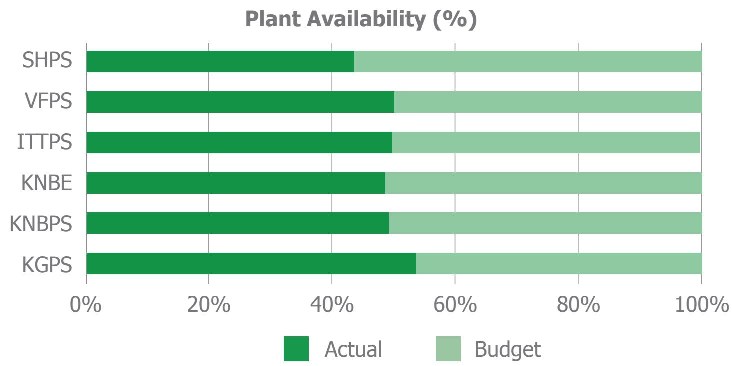


Maintenance Activities

During the year, all the power stations experienced periodic shutdowns to facilitate maintenance. The works conducted include routine annual and quarterly maintenance.







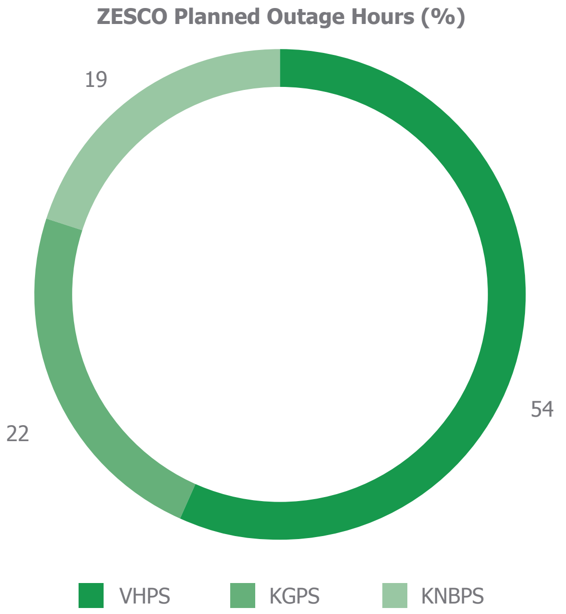
Only the Small Hydro Power Stations (SHPS) failed to exceed their targeted plant availability as only Shiwang'andu and Lunzua exceeded the targeted availability. This mainly due to disruptions to allow for maintenance works at most of the other small hydro stations.

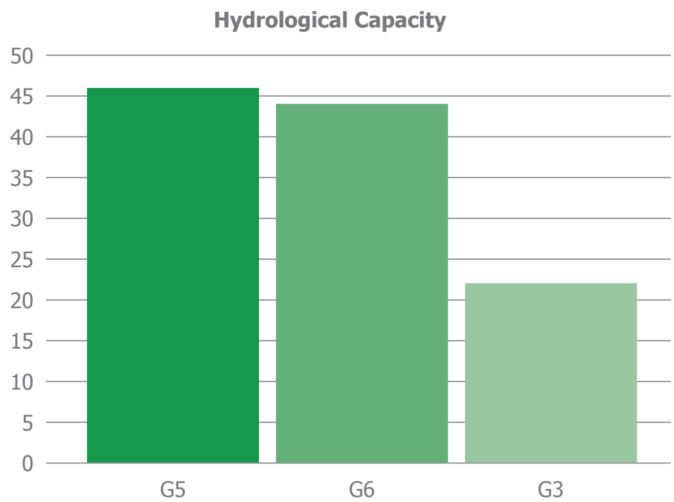
Key

Power Station	Code
Kafue Gorge	KGPS
Kariba North	KNBPS
Kariba North Extension	KNBE
Itezhi tezhi	ITTPS
Victoria Falls	VFPS
Lusiwasi	LHP
Small Hydros	SHP

Planned Outages by Power Station

Planned outages are mainly effected to carry out among other things, scheduled maintenance, replacement and installation of parts, control system upgrades, facilitating desilting of water ways and allow for tests such as commissioning tests, reliability, inspection and guarantee tests. Below are the graphical representations of the planned outage hours in the major stations as a percentage of the total planned outage and by machines measured in hours.



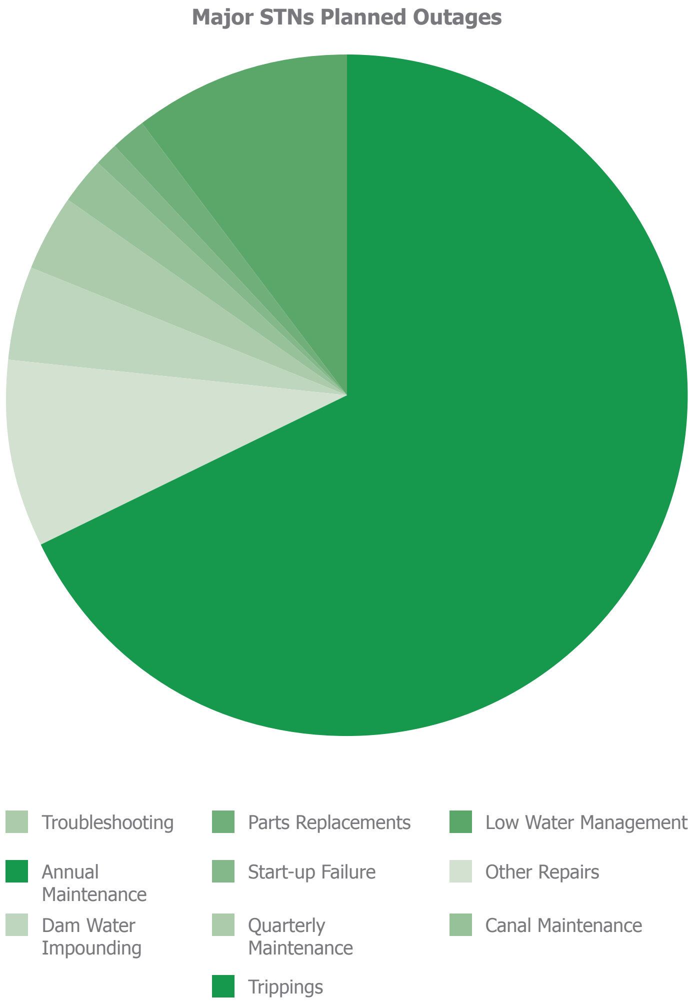


At Kafue Gorge Power Station both machines G5 and G6 had 93% of the planned outage hours equally distributed between them and the remaining having been for G3. The planned outages were mainly to cater for annual maintenance and low water management. No unplanned outage hours were recorded at the station.

At the Kariba North Bank Complex 97% of the outages affected G1 while the remaining 3% was between G2 and G3 for mainly annual maintenance. Further, machines G5 and G6 equally shared the proportion of outage hours. 140 hours were lost due to unplanned outages.

At Itezhi tezhi Power Station close to 570 hours were lost with G1 accounting for 41% and the remaining being attributed to G2.
At Victoria Falls Power Station 60% of the outage hours were accumulated on A3 and these relate to a tripping during tests conducted as part of annual maintenance. The same machine accounted for 73% of the outage hours lost due to unplanned outages. This mainly for emergency bearings inspections and repairs.

At the small hydro power stations planned outages were mainly at Musonda, Chishimba and Shiwang'andu Power Stations.



Transmission System Operational Performance

ZESCO's transmission system consists of infrastructure used for the evacuation of electricity to bulk supply points that deliver power to large industrial and mining customers as well as ZESCO's distribution system for subsequent supply to various domestic customers. It is also interconnected to the Southern African Power Pool (SAPP).
The asset base stood at over 10,000 km of High Voltage overhead transmission lines in the voltage class 66-330 kV and 147 substations with a combined transformation capacity of over 8,200 MVA.

System Stability and Security

The performance of the transmission system was generally stable for most of the year with intermittent outages resulting from internal and external system disturbances. A few equipment trip-outs were also experienced during the year.

The Average Equipment Availability Index (AEAI) for transmission lines was 99.5% a drop from 99.62 % the previous year whilst that for power transformers was 98.6%, also a drop from 99.33 %. The deviation was mainly as a result of scheduled annual maintenance for the transformers and lines which intensified in the last quarter.

The Grid did not experience any total blackout of the system during the period under review. Load management was also implemented to mitigate reduced generation due to low water levels, with an average deficit of 810MW.

The AEAI per quarter for both transmission lines as well as power transformers is as shown below:

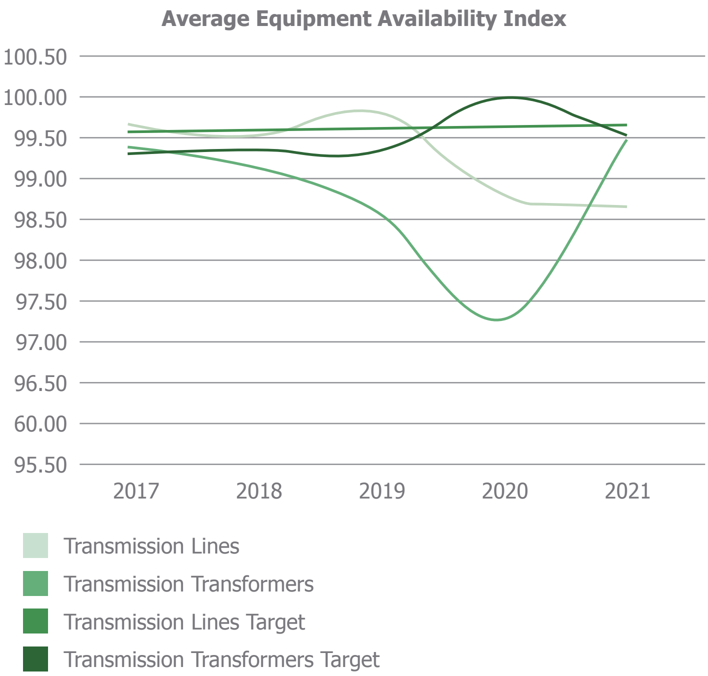


Figure 1: Average Equipment Availability for 2020

System Demand, Operations and Maintenance

The total power from the transmission grid was 15,259.60 GW a 2% increase over 2019. The maximum demand for the year was 1,977MW which occurred on 23 December 2020, recorded at 19:29 hours. The transmission losses recorded in the year stood at 795,494 MWh or 5 % which is below the ERB performance index threshold of 6 %.

The annual time based maintenance of plant and equipment commenced during the second quarter of the year but had to be rescheduled due to the outbreak of COVID-19 global pandemic and the subsequent guidelines from the Ministry of Healthy on measures to contain the spread of the disease. Internally, business operations were streamlined with some employees being required to work on rotational basis. However, other maintenance activities of preventive and corrective nature were executed by specialized teams.

The performance of the protection, control and metering infrastructure was also satisfactory during the year under review. The National Control Center (NCC) was also functional and available.
During the year, scheduled maintenance of transmission plant and equipment was conducted with an average compliance of 96.7 % of the annual planned schedule. Other maintenance activities undertaken were of the preventive, corrective and condition-based type which are expected to improve power supply security and reliability.

Voltage Level/ Fault Type	No. of Faults	Q1	Q2	Q3	Q4
88KV	-	-	-	-	-
66KV	-	-	-	-	-
33KV	4,793	1,803	1,104	231	1,655
11KV	24,453	8,974	5,309	4,027	6,143
MV Faults	45,169	14,459	12,162	9,023	9,535
Service Faults	186,215	67,867	43,846	30,453	44,049
Transformer Faults	1,245	453	400	141	251
Transformer Vandalised	128	40	41	27	20
Switchgear	174	49	35	52	38
HT Cable Faults	595	159	154	151	131

Distribution System Performance

The system performance was negatively impacted by load management and none of the four performance indices were achieved.

Demand Side Initiatives

The corporation has continued with initiatives to promote energy efficiency, monitor power quality with a view to achieving ZS387 compliance requirements, deploy advanced metering infrastructure including smart meters, meter data management system (MDMS), and integrate back end systems (BES) to MDMS on the distribution network.

Diesel Generation Performance

Electricity supply to some remote districts continued to be supported by diesel power stations. The number of such stations has reduced to only three and two of these being supplemented by power imports

Diesel Generation Performance	2021	2020	2019	2018	2017
Generation (GWh)	1.51	3.07	5.91	5.831	8.3643
Cost (K millions)	6.20	11.55	20.6	16.91	21.277
Sales (K millions)	5.4	3.28	1.2	3.0	2.2
Sales as at % of cost	86.6	28.4	5.8	17.7	10.3

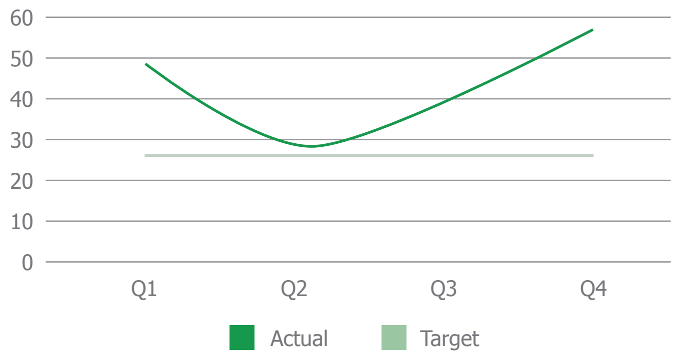
from Malawi. The total number of customers supplied by Diesel as at the end of the year stood at over 6,500. The ratio of sales relative to cost of running the stations reduced during the year due to reduced sales (a drop of 60% while the operating costs increased by 22%).

Distribution System Reliability Indices

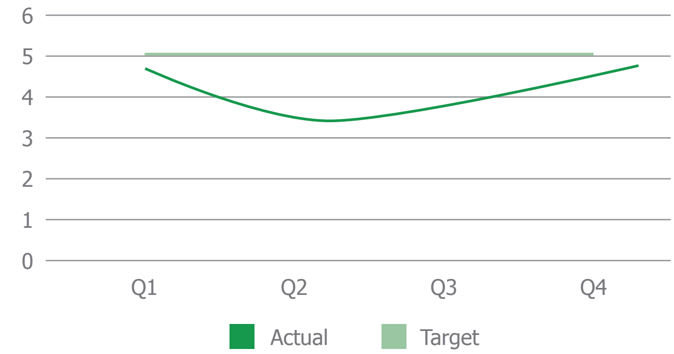
The targets set by the Regulator Energy Regulation Board (ERB) for system reliability in Distribution could not be achieved.

To improve reliability of supply, there is need to focus on solutions that would reduce the duration and frequency of supply interruptions
A summary of the performance is detailed in the following charts:

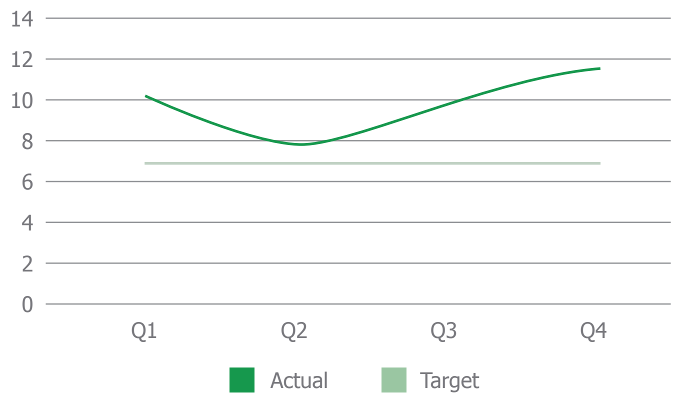
SAIDA



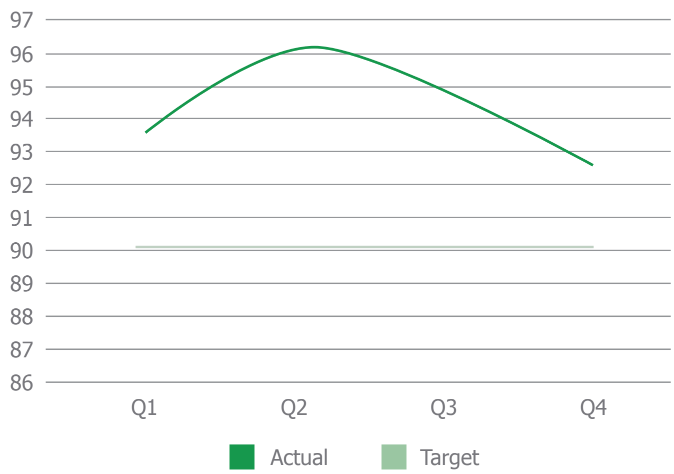
SAIDA



CAIDI



ASAI



Major Internal Activities to Improve Distribution System Operations

Enhancements to the operational performance of the distribution system through maintenance works continued in the year. These involved rehabilitation of switchgear and transformers, and network reinforcement and expansion.

Location	Objective	Details
The Lusaka Transmission & Distribution Rehabilitation Project (LTDRP)	Lusaka Area whose overall objective is to increase capacity and improve reliability of the electricity transmission and distribution system	includes upgrading of the existing 88kV to 132kV transmission networks, constructing new 132kV transmission lines, constructing/ upgrading of various 132/33/11kV substations, constructing new 33kV lines, replacing/ upgrading of 33kV and 11kV cables and constructing new 11kV switching stations.
Bauleni Substation	Refurbishment of equipment	The replacement of 11kV switchgear
Itawa Water Works Substation	Refurbishment of equipment	Replacement of switchgear and control panels in progress.
Converter 66/11 kV substation	Expansion of capacity	Through the introduction of a 33/11kV 10MVA Transformer

We have also continued building capacity to maintain distribution transformers internally at the Lusaka and Ndola Transformer Workshops thereby making maintenance cheaper and reducing transformer faults lead time. A total of 416 distribution transformers were received at the Lusaka and Ndola Transformer Workshops compared to 530 received in 2019. 244 distribution and power transformers were repaired compared to 290 the previous year. 311 Transformers were tested for external clients in the period under review compared to 571 in 2019.

Environmental Sustainability In The Provision Of Electricity Services And Energy Solutions

The environmental sustainability agenda in ZESCO is informed by enhancing socio-economic benefits, providing affordable and reliable electricity services and energy solutions to our customers, while enhancing environmental safety, which is the ethos of sustainable development.

As electricity demand is forecasted to grow significantly, the decisions of the electric utility sector, through its role in Power Generation, Transmission and Distribution are crucial in addressing environmental sustainability. As such ZESCO has adopted policies that provide for the development and operation of ZESCOs generation, transmission and distribution facilities by conducting Environmental and Social Impact Assessment (ESIA) studies. The purpose of the ESIA is to assess and predict potential adverse social and environmental impacts and to develop suitable mitigation measures, which are documented in an Environmental and Social Management Plan (ESMP). The ESMP is intended to ensure that social and environmental impacts, risks and liabilities identified during the ESIA process are effectively managed as projects are undertaken.

Below are some projects on which environmental and social impact assessment studies where conducted during the period under review

Mozambique - Zambia interconnector

Contracts were awarded to consultants to conduct a Feasibility Study for the Mozambique - Zambia interconnector. These would include Detailed Design, Specifications, Environmental and Social Impact Assessment (ESIA) including Resettlement Action Plan (RAP) and Environment and Social Management Plan (ESMP). These where awarded to WSP who are finalizing the final ESIA, RAP and ESMP reports.

Democratic Republic of Congo (DRC) and Zambia Interconnector

Consultants were engaged to conduct a feasibility study for an interconnector between the Democratic Republic of Congo (DRC) and Zambia. This project involves construction of a transmission interconnector of approximately 200 km between Panda substation in Katanga region in DRC and Kansanshi substation in the North Western Province of Zambia. The scope of the study includes a technical, economic, financial, environmental and social feasibility study, conceptual design and preparation of tender documents for the proposed interconnector. The Environmental Study is being undertaken by Afry–UK and a draft ESIA and RAP reports were prepared.

Kanona 100 MW Solar Photovoltaic (PV) Project

Environmental social impact studies (ESIA) between ZESCO Limited and African Mining Consultants where completed and a conditional decision letter favourable to the proposed project has since been granted by Zambia Environmental Management Agency (ZEMA) subject to the successful implementation of the resettlement action plan.

Climate Change Mitigation Efforts

Climate change-associated extreme weather events continue to affect the region and temperatures are expected to continue rising, and rainfall patterns are projected to continue changing. The Impact of these changes in temperatures and rainfall patterns include increased water scarcity. This water scarcity is further exacerbated by the degradation of river catchment areas and forests through poor agricultural practices that have led to reduction of flows in rivers in these catchment areas.

To address this ZESCO initiated a Programme to reforest identified degraded and deforested catchment areas. Through consultation with the Forestry Department the corporation identified two areas where the reforestation efforts were started, these are:

- The source of the mighty Zambezi River in Kalene hills in ikelenge
- The Lunzua River catchment area in Mbala

ZESCO committed to plant 10,000 indigenous tree species in each of these catchment areas and continues its reforestation efforts annually.

Our Industry

The Zambia Electricity Supply Industry (ESI) is composed of Power Producers with main players being ZESCO, Independent Power Producers (IPPs) and Independent Power Traders.

Key Institutions in the Zambian ESI

The Ministry of Energy (MoE) has a supervisory role and is responsible for policy development, direction, and management of the energy sector. The following statutory bodies support the Electricity Supply Industry (ESI);

- Energy Regulation Board (ERB)
- Zambezi River Authority (ZRA)
- Rural Electrification Authority (REA)
- Water Resources Management Authority (WARMA)

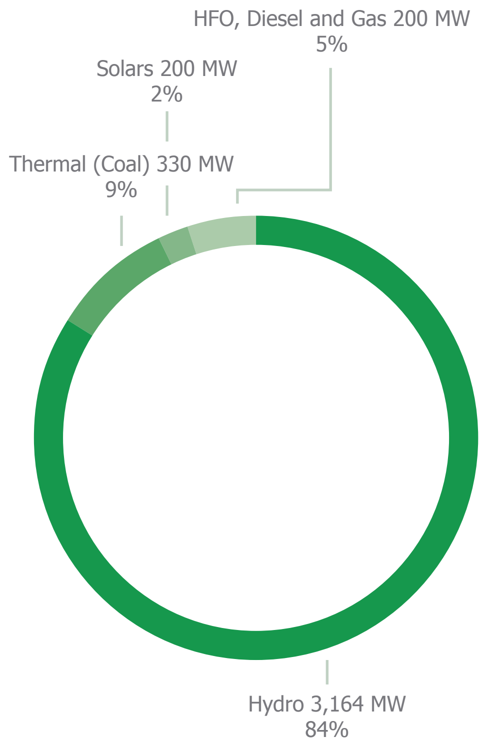
Industry Legal Framework.

The main statutes governing the ESI are;
i. Electricity Act 2019.
ii. Energy Regulation Board Act 2019.
iii Rural Electrification Act 2019.

The following are the key highlights in the Acts:
i. It gives mandate to the ERB to determine, regulate, and review charges and tariffs in the sector.
ii. Prescription of minimum contents of bilateral agreements such as PPA and PSA.
iii. Migrate the Zambian ESI from a single buyer model to a market model by providing a framework for setting up a spot market through the introduction of a licensing framework for intermediary power traders.
iv. Regulators' Power to declare a transmission and distribution network Service Provider as a common carrier.
v. Operate open access transmission regime on set terms and conditions and upon user fee payment.
vi. Deregulation of importation and exportation of power in cases of emergency.
vii. Introduce a multiyear tariff framework.
viii. Direct dealing between suppliers and off-takers

On Grid ESI Player	MW	%
Hydro Space		
ZESCO Corporation Limited	1,876.80	
KGPS Power Corporation Limited	750.00	
KNBE Corporation Limited	360.00	
Itezhi Tezhi Power Company Limited	120.00	
Lunsemfwa Hydro Power Company	56.00	
Total	3,162.80	84%
Thermal (Coal) Space		
Maamba Collieries	300.00	
Dangote	30.00	
Total	330.00	9%
Solar Space		
Bangweulu	54.30	
Ngonye	34.00	
Total	88.30	2%
HFO, Diesel and Gas Space		
Ndola Energy Company Limited	105.00	
Copperbelt Energy Corporation PLC	80.00	
Total	185.00	5%
Total ESI Grid Installed Capacity	3,766.10	100%

Off-Grid ESI Player	MW	%
Hydro Space		
Zengamina	0.75	
Kasanjiku Hydro Power Mini-Grid	0.64	
Total	1.39	8%
Solar Space		
REA	0.06	
Engie	0.03	
Solera Power	0.16	
Total	0.25	2%
HFO, Diesel and Gas Space		
ZESCO Corporation Limited	15.00	90%
Total ESI Grid Installed Capacity	16.64	100%



Transmission
The players in the transmission sector remained unchanged in 2021. CEC infrastructure is mainly in the Copperbelt province whereas ZESCO's transmission network is across all nine provinces. Lunsemfwa Hydro Power Company Limited and Maamba Collieries Ltd operates power evacuation transmission lines from their respective power stations in central and southern provinces respectively.

Key Projects in the Transmission;
- Implementation of Lusaka Transmission and Distribution Reinforcement Project (LTDRP) – Transmission Scope involves - Reinforment the Existing 132kV Network, Upgrading Lusaka 88kV transmission lines to 132kV, and Construction of New 132kV Lines and Substations.
- KGL Grid Integration - 330kV KGL to LSMFZ to Lusaka West Substation Transmission Lines
- Commissioning of the second line from Nambala Substation to Kalumbila Substation 330kV Twin Transmission Corridor and installation of Reactors at Both Substations

Distribution
The Distribution component is a fully regulated market with two major companies holding Distribution Network Service Provider (DNSP) license to supply electricity to retail customers. The composition of the sector is mainly:

i. ZESCO Limited – with the largest share of the customer base around 99.8% (Over 1.3 million Customers)

ii. North Western Energy Corporation (NWEC) - accounts for the remaining 0.2%. (Over 3,000 Customers)

Sector Overview
The ESI has the potential for growth in all sectors of the value chain. Highlighted below are some of the growth opportunities:

Generation
The sector has the potential to expand the current industry's installed capacity.

i. Hydro Generation – The country has a hydro generation potential of about 6,000 MW with less than 50% developed. The Major project with an installed capacity of 750 MW has so far commissioned 40% of the total plant capacity, the commissioning of the remaining 60% will be completed in the next fiscal year.

ii. Renewable Energy – Zambia has approximately 68% sunshine hours annually with an average irradiation of 5.5kWh/m²/day. These are ideal conditions for the development of solar photovoltaic (PV) projects. There is a lot of interest by players to develop solar power plants. In the short to medium term, it's expected that the installed capacity in the solar space will grow and significantly contribute to the ESI installed capacity.

Transmission
The ESI is taking advantage of Zambia's land-linked position to eight countries to develop transmission corridors and interconnection capacities. The developing transmission infrastructure will act as a link between the Southern Africa Power Pool and the Eastern Power Pool.

Distribution
The national population with access to electricity is only 32.8%, broken down as 70.8% and 8.1% for urban and rural areas respectively. The low electricity penetration provides potential for growth in the sub sector.

Strategic Direction
The Ministry of Energy is undertaking the following key projects to strengthen the Zambian ESI:

1. Integrated Resource Planning (IRP) in the Power Sector.
Overview
The IRP is a 30-year plan intended to transform the sector into a diverse, climate-resilient, financially sustainable sector that can provide universal access to quality power supply. An IRP outlines a country's resource requirements to meet the energy demand in line with the United Nations Sustainable Development Goals (SDGs)

Key ESI Challenges.
The following are the challenges of the Energy Sector that the IRP intends to address.
i. Country Dependency on Hydropower Generation
ii. Climate Risk
iii. Financial Sustainability
iv. Grid Readiness.

IRP Workstreams

i. Demand Forecast
This will review the demographic trends to ascertain load forecast against available generation.

ii. Generation Resource Assessment and Planning.
This will identify factors that impact the ESI's sustainable diversification of its generation sources.

iii. Transmission Infrastructure Planning
This focuses on factors affecting current transmission infrastructure and capacity, and future network requirements through substation-based demand modeling.

iv. Distribution and Demand Side Management.
This focuses on factors affecting current distribution infrastructure and capacity, and future network requirements through substation-based demand modeling.

v. Power Procurement, Financial Mobilization, and Market Structure.
The focus areas for this workstream will include.

- Identifying project financing sources and financial appraisal of projects to be prioritized through IRP.
- Migration from the single off-taker model to a market-based approach with bilateral contracts and energy traders
- Actualise the operation of a liberalized electricity market.
- Establishing an independent System Operator and economically efficient system planning.

The development of the IRP has been undertaken by CIG Zambia and funded by the UKaid. The IRP will be completed in 2022.

2. The Electricity Services Access Projects (ESAP)

This is a World Bank-funded program intended to increase residential electricity connections by lowering connection costs. As of December 31, 2021, the project had a 90 percent success rate with 40,311 connections compared to a target of 45,000.

3. Pamodzi, Working Together for Clean Energy

EU-Zambia Pamodzi for Energy is a project where the European Union and the Zambian Government collaborate in the ESI with the following goals;

- Sustain Sector Growth and Competitiveness through improved Access to clean, reliable, and affordable energy for all.
- Support the 7th National Development Plan
- Key activities
- Provided grants for improving energy policies and rolling out off-grid solutions in Rural areas.
- Upgrading of Kariba Dam Infrastructure
- Improving Electricity Distribution Network in Lusaka (ESAP)

Consolidated Financial Statements

For the year ended 31 December 2021

Report of the Directors

The Directors present their report and audited consolidated financial statements for the year ended 31 December 2021.

Principal Activity
The principal activities of the ZESCO Limited ("Company") and its subsidiaries, Kafue Gorge Lower Power Development Corporation Limited, Kalungwishi Hydropower Company Limited, Fibrecom Limited and Kariba North Bank Extension Power Corporation Limited, together the "Group" continued to be the generation, transmission, distribution and supply of electricity, locally and in the region. The Group through its subsidiary, Fibrecom Limited also provides Fibreoptic Communication backbone. The Group through its joint venture Itezhi Itezhi Power Corporation Limited and associates Zambia Electrometer Limited and El Sewedy Electric Zambia Limited also manufactures electricity meters, compact fluorescent lights and distribution transformers ranging from 25KV to a maximum of 5,000KV (5mva).

Registered Office and Principal Place of Business
Stand 6949, Great East Road,

Lusaka

Results and Dividends
The profit for the year amounted to K10,444 million (2020: loss: K15,958 million). The Directors do not recommend payment of a dividend in respect of the year ended 31 December 2021.

Directors

The Directors who held office during the year were:

Mr. Vickson Ncube	Board Chairperson (Appointed on 01 December 2021)
Mr. Victor B. Mapani	Appointed on 03 December 2021
Ms. Edna Mwaala Mudenda	Appointed on 01 December 2021
Dr. Jolly Kamwanga	Appointed on 01 December 2021
Mr. Charles Kaisala	Appointed on 01 December 2021
Mrs.Chikonjiwe Mumba	Appointed on 01 December 2021
Mr. Emmanuel Gardner	Appointed on 01 December 2021
Mr. Chibwe D. Mwelwa	Retired on 12 October 2021
Mr. Victor M. Mundende	Retired on 03 December 2021
Mr. Trevor Kaunda	Retired on 12 October 2021
Mr. George Mpundu Kanja	Retired on 12 October 2021
Mr. Pythias Mulenga	Retired on 12 October 2021
Ms. Kavumbu Hakachima	Retired on 12 October 2021

Corporate Governance
The Board continues to be committed to high standards of corporate governance, which is fundamental to discharging their leadership responsibilities. The Board applies integrity, principles of good governance and accountability throughout its activities.

Property, Plant And Equipment
The Group invested a total of K 4.9 billion (2020: K 17.2 billion) in property, plant and equipment during the year, as disclosed in note 14 to the financial statements. In the opinion of the directors of the Group, the fair values of property, plant and equipment are not less than the amounts a which they are included in the financial statements.

Intangible Assets
During the year the Group acquired software amounting to K2.5 million (2020: K0.4 million).

Exports

The value of electricity exports by the Group were K4.1 billion (2020: K2.4 billion).

Donations
The Group as part of Corporate Social Investment made donations during the year amounting to K8.6 million (2020: K3.5 million).

Research And Development
The Group's research and development activities during the year amounted to K15.4 million (2020:K12.4 million).

Share Capital
The Group's authorised share capital remained unchanged during the year.

Employees
The average number of employees during each month of the year was as follows:

	2021	2020
January	6,870	6,770
February	6,866	6,811
March	6,865	6,807
April	6,871	6,791
May	6,856	6,771
June	6,862	6,758
July	6,851	6,811
August	6,833	6,722
September	6,851	6,838
October	6,846	6,857
November	6,829	6,832
December	6,831	6,823

In addition to the staff establishment, the Group does employ seasonal workers depending on when the need arises.

Health and Safety of Employees

The Group operates an integrated Safety, Health, Environment and Quality system called SHEQ Management System based on, but not limited to, the requirements of ISO 9001, ISO 14001, ISO 45001 and ISO 27001 international standards.

The Groups' commitment to safety, health, environment and quality and information security is achieved through:

- Ensuring that operations are safe by minimising risk and eliminating harm to employees, contractors, visitors and customers;
- Establishing and reviewing of Safety, Healthy, Environment, Quality, Health and Information Security Objectives;
- Ensuring increased access to reliable and safe supply of electricity that sustains business continuity;
- Ensuring a secure and robust cyberspace through confidentiality, integrity and availability of all information
- Ensuring environmental sustainability through infrastructure development and operations;
- Ensuring effective and efficient communication with all stakeholders on matters relating to service provision;
- Ensuring consistent provision of resources, training, equipment and other support systems to enable fulfilment of this policy;
- Ensure compliance to statutory and other requirements;
- Ensuring consultation and participation of workers and their representatives; and
- Ensuring continual improvement of SHEQ management systems.

It is the duty of each employee and contractor to comply with this policy to enable the Group achieve its strategic objectives and establish and entrench a SHEQ driven culture within the Group.

Loans to Directors

The loans given or outstanding for the Directors of the Board as at 31 December 2021 was K3,594,682 (2020: Knil)

Key developments during the year

During the year under review the construction of 750 MW Kafue Gorge Lower Hydropower Station reached a milestone with 2 by 150 MW Generator Units being commissioned thereby adding 300 MW to the National Grid. The other 3 Generating Units are expected to be commissioned in 2022 and 2023. The total project cost is US$2.4 billion financed through 75% debt and 25% equity.

During the year, the Kwacha appreciated by 21% against the US dollar resulting in net exchange gains arising from the revaluation of the foreign denominated liabilities and assets held in foreign currency.

- Messrs Deloitte & Touche resigned as Auditors towards the end of 2021 financial year. Subsequently Grant Thornton were appointed as Auditors for 2021 financial year.

Auditors

Messrs Grant Thornton were appointed as Auditors for 2021 financial year. A resolution proposing their re- appointment as auditors and authorising the Directors to fix their remuneration will be put to the Annual General Meeting.

By order of the Board.

Mr. McRobby Chiwale
Group Company Secretary
Lusaka

Date:

Statement Of Responsibility for the Annual Consolidated Financial Statements

The Companies Act, 2017 requires the Directors to prepare financial statements for each financial year that give a true and fair view of the state of affairs of the Group as at the end of the financial year and of its financial performance. It also requires the Directors to ensure that the Group keeps proper accounting records that disclose, with reasonable accuracy, the financial position of the Group. They are also responsible for safeguarding the assets of the Group. The Directors are further required to ensure the Group adheres to the corporate governance principles or practices contained in Part VII Sections 82 to 122 of the Companies Act, 2017. In preparing such financial statements, the directors are responsible for:

- designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement whether due to fraud or error;
- selecting appropriate accounting policies and applying them consistently;
- making judgements and accounting estimates that are reasonable in the circumstances; and
- preparing the financial statements in accordance with the applicable financial reporting framework, and on the going concern basis unless it is inappropriate to presume that the Group will continue in business.

The directors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Group and enable them to ensure that the financial statements comply with the Zambian Companies Act 2017. They are also responsible for safeguarding the assets of the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.
The Directors confirm that in their opinion

(a) the financial statements give a true and fair view of the financial position of ZESCO Limited and its subsidiaries as at 31 December 2021, and of its financial performance and its cash flows for the year then ended;

(b) at the date of this statement there are reasonable grounds to believe that the Group will be able to pay its debts as and when these fall due; and

(c) the financial statements are drawn up in accordance with the provisions of section 265 of the Companies Act and International Financial Reporting Standards.

This statement is made in accordance with a resolution of the directors.

Signed at Lusaka on

Mr Vickson Ncube
Chairman

Mr Victor B Mapani
Managing Director

INDEPENDENT AUDITOR'S REPORT

TO THE MEMBERS OF
ZESCO LIMITED

Report on the Audit of the Financial Statements

Qualified Opinion

We have audited the financial statements of ZESCO Limited (The Company) and its subsidiaries (The group), which comprise the consolidated and separate statement of financial position as at 31 December 2021, and the consolidated and separate statement of profit or loss and other comprehensive income, the consolidated and separate statement of changes in equity and the consolidated and separate statement of cash flows for the year then ended, notes to the Financial Statements, including a summary of significant accounting policies.

In our opinion, except for the effects of the matters described in the Basis for Qualified Opinion section of our report, the accompanying financial statements give a true and fair view of the consolidated and separate financial position of ZESCO Limited as at 31 December 2021, and of its consolidated and company financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards and the requirements of the Companies Act.

Basis for qualified opinion

1. There is no assessment of the carrying value of property plant and equipment included in the statement of financial position at K81,592,217,000. The last valuation was done as at 31 December 2017. We were unable to determine whether any impairment adjustments were necessary.
2. The Group's cash and cash equivalents includes two bank accounts with balances of K142,460 and USD 984,847 equivalent of K16,227,248 confirmed by the Bank which had not been included in the ledgers of the Group. These have now been included in cash and cash equivalents and a corresponding liability recognised. The Group owns the bank accounts but we were unable to confirm the related transactions.

The financial statements of ZESCO Limited and its Subsidiaries for the year ended 31 December 2020 were audited by another auditor who issued a disclaimer of opinion on the basis that the Group incurred a net loss of K15.96 billion for the year ended 31 December 2020 (2019: K5.6 billion) and as of that date, the Group's current liabilities exceeded its current assets by K32.3 billion (2019: K17.1 billion). The notes stated that the Group would continue to receive financial support from the Government of the Republic of Zambia, however, the Directors were not able to obtain a legally enforceable letter of support. In addition, the Directors under the turnaround plan had made assumptions that they would renegotiate tariffs with Independent Power Producers, defer payments to major suppliers and also proposed to convert the loans from the Government to equity, however, there were no formal agreements supporting these assumptions. Consequently, the auditor was unable to confirm or dispel whether it was appropriate to prepare the financial statements using the going concern basis of accounting.

Furthermore, Property, Plant and Equipment had not been impaired in the year. However, the impairment assessment performed by management also relied on the above key assumptions. Consequently, the auditor was also unable to confirm or dispel whether the valuation of the Property, Plant and Equipment is accurate and whether the impairment expense was complete.

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with the ethical requirements that are relevant to our audit of the financial statements in Zambia and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained was sufficient and appropriate to provide a basis for our qualified opinion.

Material uncertainty related to going concern

We draw attention to note 29 in the financial statements which indicates that the Group's current liabilities exceeded its current assets by K29 billion (2020: K32.29 billion) and at the reporting date the Group had negative retained earnings of K9.37 billion. At the reporting date, the total borrowings amounted to K35.10 billion (2020: K46.68 billion) on which some of the loan covenants were breached. Government of the Republic of Zambia has issued a formal letter of support to the Group. These conditions indicate the existence of a material uncertainty which may cast doubt about the Group's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters	How the matter was addressed in our audit
Measurement of financial assets Due to the complex and subjective nature of judgements made in the assumptions by the Directors over the measurement of financial assets this was considered a key audit matter. • The Directors are required to apply the forward-looking approach to recognize expected credit losses based on IFRS 9's impairment requirements. • Further, in assessing the fair value of financial assets, the Directors use a variety of valuation methods based on the classification of assets and make assumptions that are based on market conditions and other relevant valuation data existing at each reporting date. **Long service retirement benefit** The Group operates an unfunded long-term service retirement benefit plan. Under the terms of employment, qualifying employees are entitled to post-employment benefits. The benefits are defined benefit in nature based on the members' length of service and their salary at the earlier of retirement or death or termination from employment (the Employer) meets benefit costs as they fall due. The assumptions that underpin the valuation of the defined benefit pension assets and liabilities are important, and also subjective, judgements as to the surplus/deficit balance is volatile and affects the Group's retained earnings. Uncertainty arises as a result of estimates made based on the Group's expectations about long-term trends and market conditions. As a result, the actual surplus or deficit realized by the Group may be significantly different to that recognized on the statement of financial position since small changes to the assumptions used in the calculation materially affect the valuation. Key assumptions that are involved in the calculation of the defined benefit obligation as per note 23 to the financial statements are: • Discount rate; and • Expected rate of salary increment.	Our procedures included but were not limited to the following: • Assessing the design and implementation of the impairment model adopted with focus on compliance with the requirements of IFRS 9: "Financial Instruments". • Reviewing management's evaluation of possible outcomes and the probability of occurrence. • Checking the reasonableness of the information and ensuring the information was supported with reference to past events, current conditions as well as forecast of the future. • We obtained the analysis prepared by management in calculating the fair value of the assets. • We evaluated management's valuation assumptions and changes in assumptions to ensure they were reasonable and consistent with market information and other relevant valuation data. • Performed audit procedures over the valuation and accounting of investments in financial assets, to ensure that the valuation inputs applied to various valuation techniques were reasonable. In considering the actuarial valuation of pension obligations, we performed the following procedures: • Obtained the actuarial report based on 31 December 2021 numbers. • Reviewed the valuation in relation to IAS 19 requirements. • Reviewed key inputs used within the report as well as challenged key assumptions made. • Performed a retrospective review to assess obligation for reasonableness. • Compared the discount rates used to Government Bond yield rates available with the Bank of Zambia. • We reviewed the level of salary increment considered by the Group for 2022 and projections for the future.

Other Information

The Directors are responsible for the other information. The other information comprises the Directors' Report as required by the Companies Act, 2017, which we obtained prior to the date of this auditor's report. The other information does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance or conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Financial Statements

The Directors are responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards and in the manner required by the Companies Act, 2017 and for such internal control as the Directors determine is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors, as highlighted above, are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatements, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Directors.
- Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities of business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Directors, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matters or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on other legal and regulatory requirements

The Companies Act, 2017 requires that in carrying out our audit of ZESCO Limited and its subsidiaries, we report on whether:

- There is a relationship, interest or debt which we as the Group's auditors have in the Group;
- There are serious breaches by the Group's Directors of the corporate governance principles or practices contained in Part VII sections 82 to 112 of the Companies Act, 2017 ; and
- There is an omission in the financial statements as regards particulars of loans made to a Group officer (a director, Group secretary or executive officer of a Group) during the year, and if reasonably possible, disclose such information in our opinion.

In respect of the foregoing requirements, we have no matters to report.

Chartered Accountants

Edgar Hamuwele (AUD/F000111)
Name of Partner signing on behalf of the firm

Lusaka

Date:

CONSOLIDATED AND SEPARATE STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

for the year ended 31 December 2021

		Group		Company	
		2021	**2020**	**2021**	**2020**
	NOTES	**K'000**	**K'000**	**K'000**	**K'000**
REVENUE	5	22,002,025	18,476,528	21,897,616	18,476,528
Cost of sales	6	(9,137,685)	(9,500,952)	(9,914,063)	(10,175,389)
GROSS PROFIT		12,864,340	8,975,576	11,983,553	8,301,139
Other operating income	7	811,307	638,009	859,616	847,799
Other gains/(losses)	8	8,745,791	(11,373,026)	7,505,883	(9,346,091)
Selling and distribution expenses		(8,719)	(12,811)	(8,144)	(12,619)
Administration expenses		(4,970,506)	(4,412,257)	(4,847,689)	(4,468,001)
Other expenses	9	(5,729,254)	(9,675,646)	(6,001,898)	(9,421,738)
Finance costs	10	(963,839)	(795,096)	(874,971)	(741,075)
Share of (loss)/profit of associates	17.1	(25,836)	8,557	-	-
Share of loss of a joint venture	17.1	(25,561)	(54,902)	-	-
PROFIT/(LOSS) BEFORE TAX		10,697,723	(16,701,596)	8,616,350	(14,840,586)
Income tax (charge)/credit	12	(253,971)	743,947	(33,922)	(754,303)
PROFIT/(LOSS) FOR THE YEAR		10,443,752	(15,957,649)	8,582,428	(15,594,889)
OTHER COMPREHENSIVE INCOME					
Items that will not be reclassified subsequently to profit or loss:					
Change in defined benefit obligation	23	-	1,379,304	-	1,379,304
Other comprehensive income for the year, net of income tax		-	1,379,304	-	1,379,304
TOTAL COMPREHENSIVE PROFIT/(LOSS) FOR THE YEAR		10,443,752	(14,578,345)	8,582,428	(14,215,585)

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

for the year ended 31 December 2021

GROUP

	Share capital	Revaluation reserve	Retained earnings/ Accumulated losses	Total
	K'000	K'000	K'000	K'000
Balance at 1 January 2020	2,825,118	12,992,382	1,785,359	17,602,859
Loss for the year	-	-	(15,957,649)	(15,957,649)
Other comprehensive loss for the year			1,379,304	1,379,304
Deferred tax on revaluation	-	230,608	-	230,608
Amortisation of revaluation reserve	-	(672,717)	672,717	-
Balance at 31 December 2020	**2,825,118**	**12,550,273**	**(12,120,269)**	**3,255,122**
Other comprehensive income for year	-	-	10,443,752	10,443,752
Deferred tax derecognised (i)	-	8,369,121	(8,369,121)	-
Amortisation of revaluation reserve	-	(675,155)	675,155	-
Balance at 31 December 2021	**2,825,118**	**20,244,239**	**(9,370,483)**	**13,698,874**

(i) This represents derecognition of deferred tax on revaluation reserve for prior years. The Directors believe that there will be no future tax consequences as there is no capital gains tax in Zambia

COMPANY

	Share capital	Revaluation reserve	Accumulated Profits/(losses)	Total
	K'000	K'000	K'000	K'000
Balance at 1 January 2020	2,825,118	12,992,382	4,111,349	19,928,849
Loss for the year	-	-	(15,594,889)	(15,594,889)
Other comprehensive income for the year	-	-	1,379,304	1,379,304
Deferred tax on revaluation	-	230,608	-	230,608
Amortisation of revaluation reserve	-	(673,936)	673,936	-
Balance at 31 December 2020	**2,825,118**	**12,549,054**	**(9,430,300)**	**5,943,872**
Profit for the year	-	-	8,582,428	8,582,428
Other comprehensive income for the year				
Transfer to Fibrecom Limited	-	-	(14,871)	(14,871)
Deferred tax derecognized (i)	-	8,369,121	(8,369,121)	-
Amortisation of revaluation reserve	-	(673,936)	673,936	-
Balance at 31 December 2021	**2,825,118**	**20,244,239**	**(8,557,928)**	**14,511,429**

(i) This represents derecognition of deferred tax on revaluation reserve for prior years. The Directors believe that there will be no future tax consequences as there is no capital gains tax in Zambia

Consolidated Statement of Financial Position

for the year ended 31 December 2021

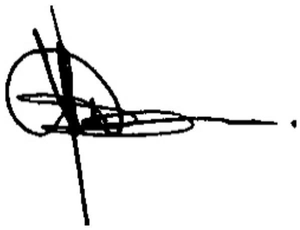
		Group		Company	
		2021	2020	2021	2020
	Notes	K'000	K'000	K'000	K'000
ASSETS					
Non current assets					
Property, plant and equipment	14	81,592,217	82,331,267	50,917,488	49,338,724
Intangible assets	15	75,392	84,673	5,301	84,563
Right of use assets	16	16,882	8,010	14,745	8,010
Investments in associates	17.1	49,991	75,827	12,817,156	10,488,338
Investments in a joint venture	17.1	228,347	-	-	-
Deferred tax asset		149,640	356,341	-	-
Total non current assets		82,112,469	82,856,118	63,824,690	59,919,635
Current Assets					
Inventories	18	873,463	773,898	733,982	704,681
Trade and other receivables	19	2,124,590	4,249,152	1,995,373	4,230,628
Amounts due from related parties	21	3,876,886	4,977,870	3,908,345	4,984,172
Cash and bank balances		2,985,177	4,379,936	2,321,959	3,109,074
Total current assets		9,860,116	14,380,856	8,959,659	13,028,555
TOTAL ASSETS		**91,972,585**	**97,236,974**	**72,784,349**	**72,948,190**
EQUITY AND RESERVES					
Capital and reserves					
Issued capital	20	2,825,118	2,825,118	2,825,118	2,825,118
Revaluation reserve		20,244,239	12,550,273	20,244,239	12,549,054
Accumulated losses		(9,370,483)	(12,120,269)	(8,557,928)	(9,430,300)
Total equity		13,698,874	3,255,122	14,511,429	5,943,872
Non current liabilities					
Borrowings	22	33,318,258	42,706,962	17,670,900	22,453,931
Retirement benefit obligation	23	3,066,379	1,836,787	3,066,379	1,836,787
Capital grants and contributions	24	2,997,100	2,756,877	2,997,100	2,756,877
Lease liabilities	28	14,929	10,017	14,539	10,017
Total non current liabilities		**39,396,666**	**47,310,643**	**23,748,918**	**27,057,612**

Consolidated Statement of Financial Position

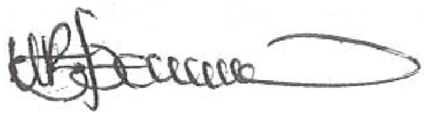
for the year ended 31 December 2021 (Continued)

		Group		Company	
		2021	**2020**	**2021**	**2020**
	Notes	**K'000**	**K'000**	**K'000**	**K'000**
Current liabilities					
Trade and other payables	25	25,642,769	30,929,068	20,176,070	23,694,800
Amounts due to related parties	21	9,811,043	9,674,319	10,564,868	10,357,585
Borrowings	22	1,775,268	3,974,751	2,157,293	3,801,369
Retirement benefit obligation	23	178,335	253,251	176,460	253,251
Capital grants and contributions	24	133,966	123,227	133,966	123,227
Current tax liabilities	12	1,312,980	1,672,953	1,299,634	1,672,834
Lease liabilities	28	22,684	6,435	15,711	6,435
Bank overdraft	26	-	37,205	-	37,205
Total current liabilities		38,877,045	46,671,209	34,524,002	39,946,706
Total liabilities		78,273,711	93,981,852	58,272,920	67,004,318
TOTAL EQUITY AND LIABILITIES		**91,972,585**	**97,236,974**	**72,784,349**	**72,948,190**

The responsibilities of the Group's Directors with regard to the preparation of the financial statements are set out on page 5. The financial statements on pages 13 to 96 were approved by the Board of Directors and authorised for issue on and were signed on its behalf by:



Mr Vickson Ncube
Chairman



Mr Victor B Mapani
Managing Director

Consolidated Statement of Cash Flows

for the year ended 31 December 2021

		Group		Company	
		2021	**2020**	**2021**	**2020**
		K'000	**K'000**	**K'000**	**K'000**
CASH FLOWS FROM OPERATING ACTIVITIES	**Notes**				
Profit/(loss) for the year		10,697,723	(16,701,596)	8,616,350	(14,840,586)
Adjustments for:					
- Share of profit of associates	17.1	25,836	(8,557)	-	-
- Share of loss of joint venture	17.1	25,561	54,902	-	-
- Interest income	7	(1,466)	(10,433)	(1,380)	(10,117)
- Finance costs recognised in profit or Loss	10	963,839	795,096	874,971	741,075
- Net exchange (gains)/losses recognised on borrowings	22	(9,958,658)	15,164,029	(5,699,555)	8,374,309
-Loss on transfer of assets to Fibrecom		-	-	11,439	-
- Net exchange losses on work in progress		3,638,397	-	-	-
- Loss on disposal of property, plant and equipment		4,293	1,875	2,787	1,875
- Depreciation of non-current assets	14	1,974,356	1,948,536	1,910,356	1,883,592
- Capitalised depreciation	14	(582)	(772)	-	-
- Amortisation of intangible assets	15	10,465	7,608	10,429	7,576
- Depreciation on right of use assets	16	8,080	9,321	2,854	7,724
- Impairment of investments	17	(253,908)	253,908	-	170,385
- Amortisation of capital grants and Contributions	24	(196,677)	(187,031)	(196,677)	(187,031)
- Impairment loss recognised on trade Receivables	19	2,759,434	7,383,037	2,690,572	7,383,037
- Impairment loss recognised on amounts due from related parties		(142,257	108,174	(142,257)	108,174
- Impairment loss recognised on other Receivables	19	(12,210)	196,489	(12,210)	(196,489)
- Impairment reversal recognised on other receivables	19	36,935	(695,324)	36,935	695,324
- Unrealised exchange gains		(104,469)	(949,340)	-	(949,340)
		9,474,692	7,369,922	8,104,614	3,189,508

Consolidated Statement of Cash Flows

for the year ended 31 December 2021 (Continued)

		Group		Company	
		2021	2020	2021	2020
	Notes	K'000	K'000	K'000	K'000
Cash Flows from Operating Activities					
Movements in working capital					
Increase in inventory		(99,565)	(181,833)	(29,301)	(122,642)
Decrease/(increase) in trade and other receivables		(659,594)	(8,390,055)	(480,041)	(9,391,940)
(Increase)/decrease in amounts due from related parties		1,243,240	(1,775,258)	1,218,084	(1,773,429)
(Increase)/decrease in trade and other payables		(5,286,299)	14,474,983	(3,518,730)	9,624,384
Increase in deferred liabilities		1,154,676	614,767	1,152,801	614,767
Increase in amounts due to related parties		136,724	5,104,288	207,285	5,201,279
Decrease in borrowings due from related party		-	-	-	3,970,294
Cash generated from operations		**5,963,874**	**17,216,814**	**6,654,712**	**11,312,221**
Interest paid	10	(963,839)	(795,096)	(874,971)	(741,075)
Income taxes paid	12	(407,243)	(162,087)	(407,122)	(161,883)
Net cash generated by operating activities		**4,592,792**	**16,259,632**	**5,372,619**	**10,409,263**
CASH FLOWS FROM INVESTING ACTIVITIES					
Proceeds from disposal of property, plant and equipment		447	2,894	447	3,146
Payments for property, plant and equipment	14	(4,877,861)	(17,212,061)	(3,505,304)	(4,226,289)
Payments for intangible assets	15	(1,184)	(381)	(1,167)	(381)
Payment to acquire investments		-	-	(2,328,818)	(7,542,134)
Right of use asset addition		(16,952)	-	-	-
Interest received	7	1,466	10,433	1,380	10,117
Net cash used in investing activities		(4,894,085	(17,199,115)	5,833,462	(11,755,541)

Consolidated Statement of Cash Flows

for the year ended 31 December 2021 (Continued)

		Group		Company	
		2021	**2020**	**2021**	**2020**
	Notes	**K'000**	**K'000**	**K'000**	**K'000**
CASH FLOWS FROM FINANCING ACTIVITIES					
Repayment of borrowings	22	(4,189,345)	(2,648,253)	(3,329,549)	(2,517,271)
Additions/(repayment) of lease liabilities	28	21,160	(12,078)	(9,153)	(6,886)
Proceeds from capital grants and contributions	24	447,638	240,025	447,638	240,025
Proceeds from borrowings	22	2,559,816	4,151,670	2,601,997	3,421,927
Net cash (utilized)/generated (in)/from financing activities		(1,160,731)	1,731,364	(289,067)	1,137,795
Net (decrease)/increase in cash and cash equivalents		(1,462,023)	791,880	(749,910)	(208,483)
Cash and cash equivalents at the beginning of the year		4,342,731	2,601,511	3,071,869	2,331,012
Effect of foreign exchange rate changes		104,469	949,340	-	949,340
Cash and cash equivalents at the end of the year		2,985,177	4,342,731	2,321,959	3,071,869
COMPRISING OF:					
Bank and cash balances*		2,985,177	4,379,936	2,321,959	3,109,074
Bank overdraft	26	-	(37,205)	-	(37,205)
		2,985,177	4,342,731	2,321,959	3,071,869

*Included in bank and cash balances are restricted funds amounting to K2.4 billion. The cash is held as part of Debt Security Reserves.

Notes to the Consolidated Financial Statements

for the year ended 31 December 2021

1. Principal activities

The principle activities of the Group continued to be the generation, transmission, distribution and supply of electricity and provision of IP connectivity.

2. International Financial Report Standards (IFRS)

a) Basis of consolidation

The Group's financial statements consolidate those of the parent company and all of its subsidiaries as of 31 December 2021. All subsidiaries have a reporting date of 31 December. All transactions and balances between Group companies are eliminated on consolidation, including unrealised gains and losses on transactions between Group companies. Where unrealised losses on intra-group asset sales are reversed on consolidation, the underlying asset is also tested for impairment from a Group perspective. Amounts reported in the financial statements of subsidiaries have been adjusted where necessary to ensure consistency with the accounting policies adopted by the Group. Profit or loss and other comprehensive income of subsidiaries acquired or disposed of during the year are recognised from the effective date of acquisition, or up to the effective date of disposal, as applicable. The Group attributes total comprehensive income or loss of subsidiaries between the owners of the parent and the non-controlling interests based on their respective ownership interests.

b) Basis of preparation

The financial statements are prepared in accordance with the provisions of the Companies Act and International Financial Reporting Standards (IFRS). The financial statements are presented in accordance with IAS 1 "Preparation of financial statements" (Revised 2007). The Group has elected to present the "Statement of Comprehensive income" in one statement namely the "Statement of Comprehensive Income". IAS 1 also requires the presentation of a comparative statement of financial position and related notes at the beginning of the first comparative period. The financial statements have been prepared under the historic cost convention, as modified by the revaluation of property, plant and equipment, available-for-sale financial assets, and financial assets and liabilities at fair value through profit or loss.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are disclosed in note 4.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of IFRS 2, leasing transactions that are within the scope of IAS 17, and measurements that have some similarities to fair value but are not fair value, such as realisable value in IAS 2 or value in use in IAS 36.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

Items included in the financial statements are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The financial statements are presented in thousands of the Zambian Kwacha (K).

c) New Standards and amendments that are effective at 1 January 2021 and are applicable to the Group

- COVID-19-related rent concessions beyond 30 June 2021 (Amendments to IFRS 16)
- Interest Rate Benchmark Reform Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)1.

These amendments do not have a significant impact on these Financial Statements and therefore the disclosures have not been made.

d) Standards, amendments and Interpretations to existing Standards that are not yet effective and have not been adopted early by the Group

- IFRS 17 Insurance Contracts
- Amendments to IFRS 17 Insurance Contracts (Amendments to IFRS 17 and IFRS 4)
- References to the Conceptual Framework
- Proceeds before Intended Use (Amendments to IAS 16)
- Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)
- Annual Improvements to IFRS Standards 2018-2020 Cycle (Amendments to IFRS 1, IFRS 9, IFRS 16, IAS 41)
- Classification of Liabilities as Current or Non-current (Amendments to IAS 1)
- Deferred Tax related to Assets and Liabilities from a Single Transaction.

These amendments are not expected to have a significant impact on the financial statements in the period of initial application and therefore no disclosures have been made.

Management anticipates that all relevant pronouncements will be adopted for the first period beginning on or after the effective date of the pronouncement. New Standards, amendments and Interpretations not adopted in the current year have not been disclosed as they are not expected to have a material impact on the Group's financial statements.

3. Significant accounting policies

a) Statement of compliance

The financial statements have been prepared in accordance with International Financial Reporting Standards.

b) Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable for the sale/provision of goods and services in the ordinary course of the Group's activities. Revenue is shown net of value-added tax (VAT), excise duties, discounts and rebates.

Revenue arises mainly from the distribution and supply of electricity to customers being Mines, exports, domestic and commercial customers and supply of internet and leased circuit.

To determine whether to recognise revenue, the Group follows a 5-step process:

1. Identifying the contract with a customer;
2. Identifying the performance obligations;
3. Determining the transaction price;
4. Allocating the transaction price to the performance obligations; and
5. Recognising revenue when/as performance obligation(s) are satisfied.

The Group enters into transactions involving a range of the Group's products and services. These include wheeling of electricity and supply of electricity.

In all cases, the total transaction price for a contract is allocated amongst the various performance obligations based on their relative stand-alone selling prices. The transaction price for a contract excludes any amounts collected on behalf of third parties.

Revenue is recognised either at a point in time or over time, when (or as) the Group satisfies performance obligations by transferring the promised goods or services to its customers.

The Group recognises contract liabilities for consideration received in respect of unsatisfied performance obligations and reports these amounts as customer financed long term payables in the statement of financial position. Similarly, if the Group satisfies a performance obligation before it receives the consideration, the Group recognises either a contract asset or a receivable in its statement of financial position, depending on whether something other than the passage of time is required before the consideration is due.

c) Sale of electricity
Revenue from the sale of electricity for an agreed tariff is recognised when or as the Group transfers electricity to the customer. Invoices for goods or services transferred are due upon receipt by the customer. Prepaid sales are recognised at the point when the electricity tokens are issued to the customers.

For stand-alone sales of energy and capacity (Bulk supply of electricity) that are neither customised by the Group nor subject to significant integration services, control transfers at the point in time that the customer takes undisputed delivery of the goods. When such items are either customised or sold together with significant integration, they represent a single combined performance obligation over which control is considered to transfer over time. This is because the combined product is unique to each customer (has no alternative use) and the Group has an enforceable right to payment for the power delivered to date.

The sale of energy to customers in the foreign countries and Zambia bought from utilities in the Southern Africa Power Pool (SAPP) is known as power trading.

d) Interest income
Interest revenue is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

e) Rental income
Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease.

f) Fibre income
Fibre income is recognised on the accrual basis in accordance with the substance of the agreement. Connection fees are deferred over the useful life of the fibrecom assets through Income Statement. Access charges are recognised in the period to which it relates. This income was transferred from ZESCO Limited to the subsidiary, Fibrecom Limited in 2021.

g) Inventories
All Inventories are stated at the lower of cost and net realisable value. Cost is calculated on a weighted average basis and includes all expenditure incurred in bringing the inventories to their present location and condition. Net realisable value is the price at which inventory can be realised in the normal course of business and takes into account all directly related costs to be incurred in marketing, selling and distribution. Provision is made for obsolete, slow moving and defective inventories.

h) Foreign currencies
In preparing the financial statements of the entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognised at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences on monetary items are recognised in profit or loss in the period in which they arise except for exchange differences:

- on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings; and
- arising on foreign currency transactions are posted to the profit and loss in the period they arise.

i) Borrowing costs
Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the financial period in which they are incurred.

j) Capital grants and contributions
Capital grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attached to them and that the grants will be received.

Capital grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred revenue in the statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Capital contributions represent money received from electricity consumers towards the capital cost of connections. Capital contributions are deferred and credited to profit or loss in equal annual instalments over the expected useful lives of the related assets.

k) Taxation
Income tax expense represents the sum of the tax currently payable and deferred tax.

i) Current tax
The tax currently payable is based on taxable profit for the financial period. Taxable profit differs from profit as reported in profit or loss because of items of income or expense that are taxable or deductible in other financial periods and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

ii) Deferred tax
Deferred tax is recognised on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised.

(continued)

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

(iii) Current and deferred tax for the financial period

Current and deferred tax are recognised in profit or loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in profit or loss or directly in equity respectively.

l) Property, plant and equipment

Property, plant and equipment are stated in the statement of financial position at their cost or revalued amounts, being the fair value at the date of revaluation, less any subsequent accumulated depreciation and subsequent impairment losses.

Depreciation is charged to write off the cost or revalued amounts of property, plant and equipment over their estimated useful lives, on a straight line basis, over the following number of years:

Generation, Transmission and Distribution Systems:

Dams, tunnels, power houses and other civil structures	60 years
Generators, Turbines, Transformers and Towers	40 years
Transmission and distribution systems	25 - 50 years

Other Assets:

Buildings - Roads, Workshops, Offices and Houses	30-50 years
Furniture, Vehicles and IT	3 - 15 years

Capital work in progress is not depreciated

Depreciation is recognised so as to write off the cost or revalued amounts of assets less their residual values over their useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Such properties are classified to the appropriate categories of property and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Management has estimated the residual values of the property, plant and equipment at 31 December 2021 to be insignificant and for purpose of the financial statements have been assigned a nil value.

Repairs and maintenance expenses are charged to profit or loss during the period in which they are incurred. The cost of major renovations is included in the carrying amount of the asset when it is probable that future economic benefits in excess of the originally assessed standard of performance of the existing asset will flow to the Group.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

The surplus arising on revaluation of tangible assets is credited to a non-distributable reserve. Decreases that offset previous revaluations of the same asset are charged against the revaluation reserve. All other decreases are charged to the statement of comprehensive income. Each year the difference between depreciation based on the revalued carrying amount of the asset (the depreciation charged to the statement of comprehensive income) and depreciation based on the asset's original cost is transferred from the revaluation reserve to revenue reserves. On disposal of revalued assets, amounts in the revaluation reserve relating to that asset are transferred to revenue reserves.

Assets held under finance leases are depreciated over their useful lives on the same basis as owned assets. However, when there is no reasonable certainty that ownership will be obtained by the end of the lease term, assets are depreciated over the shorter of the lease term and their useful lives.

m) Leases

At inception of a contract, the Group assesses a contract as, or containing, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether the contract involves the use of an identified asset, the Group has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and the Group has the right to direct the use of the asset.

i) Group as a lessee

On initial application of IFRS 16, the Group recognised a lease liability measured at the present value of all the remaining lease payments, discounted using the lessee's incremental borrowing rate at 1 January 2019 whereas the Group has elected to measure right-of-use asset at its carrying amount as if IFRS 16 had been applied since the lease commencement date, but discounted using the lessee's incremental borrowing rate at 1 January 2019. The Group has elected not to recognise a lease liability and a right-of-use asset for leases for which the lease term ends within twelve months of 1 January 2019 and has accounted for these leases as short-term leases.

For new lease contracts, the Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease agreements in which it is the lessee in the statement of financial position. The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate. Lease liabilities include the net present value of fixed payments (including in-substance fixed payments), variable lease payments that are based on consumer price index ('CPI'), the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

The lease payments are discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate.

Subsequently, the lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments including due to changes in CPI or if the

Group changes its assessment of whether it will exercise a purchase, extension or termination option or when the lease contract is modified and the lease modification is not accounted for as a separate lease. The corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the related right-of-use asset has been reduced to zero.

Right-of-use assets are measured at cost comprising the amount of the initial measurement of lease liability, any lease payments made at or before the commencement date less any lease incentives received, any initial direct costs, and restoration costs.

Subsequent to initial recognition, right-of-use assets are stated at cost less accumulated depreciation and any impairment losses and adjusted for certain remeasurements of the lease liability. Depreciation is computed using the straight-line method from the commencement date to the end of the useful life of the underlying asset or the end of the lease term, whichever is shorter. The estimated useful lives of right-of-use assets are determined on the same basis as those of the underlying property and equipment.

In the statement of financial position, the right-of-use assets and lease liabilities are presented separately.

When a contract includes lease and non-lease components, the Group allocates the consideration in the contract on the basis of the relative stand-alone prices of each lease component and the aggregate stand-alone price of the non-lease components.

The Group has elected not to recognise right-of-use assets and lease liabilities for short term leases of machinery that have a lease term of 12 months or less and leases of low value assets. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

ii) Group as a lessor

Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Amounts due from lessees under a finance lease are recognised as receivables at an amount equal to the net investment in the leased assets. Finance lease income is allocated to the periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the finance lease.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the lease term.

When a contract includes lease and non-lease components, the Group applies IFRS 15 to allocate the consideration under the contract to each component.

n) Intangible assets

Intangible assets with finite useful lives that are acquired separately are carried at cost less accumulated amortisation and accumulated impairment losses. Amortisation is recognised on a straight-line basis over their estimated useful lives. The estimated useful life and amortisation method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

o) Impairment of tangible and intangible assets

At the end of each reporting period the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

When an impairment loss subsequently reverses, the carrying amount of the asset (cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (cash-generating unit) in prior financial periods. A reversal of an impairment loss is recognised immediately in profit or loss unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

p) Financial instruments

Financial assets and financial liabilities are recognised in the Group's statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

i) Financial assets

All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

All recognised financial assets are measured subsequently in their entirety at either amortised cost or fair value, depending on the classification of the financial assets.

ii) Classification of financial assets

Debt instruments that meet the following conditions are measured subsequently at amortised cost:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Debt instruments that meet the following conditions are measured subsequently at fair value through other comprehensive income (FVTOCI):

- the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets; and

- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

By default, all other financial assets are measured subsequently at fair value through profit or loss (FVTPL).

- the Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if certain criteria are met; and
- the Group may irrevocably designate a debt investment that meets the amortised cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

(i) Amortised cost and effective interest method

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest income over the relevant period.

For financial assets other than purchased or originated credit-impaired financial assets (i.e. assets that are credit-impaired on initial recognition), the effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) excluding expected credit losses, through the expected life of the debt instrument, or, where appropriate, a shorter period, to the gross carrying amount of the debt instrument on initial recognition. For purchased or originated credit-impaired financial assets, a credit-adjusted effective interest rate is calculated by discounting the estimated future cash flows, including expected credit losses, to the amortised cost of the debt instrument on initial recognition.

The amortised cost of a financial asset is the amount at which the financial asset is measured at initial recognition minus the principal repayments, plus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. The gross carrying amount of a financial asset is the amortised cost of a financial asset before adjusting for any loss allowance.

Interest income is recognised using the effective interest method for debt instruments measured subsequently at amortised cost and at FVTOCI. For financial assets other than purchased or originated credit-impaired financial assets, interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset. If, in subsequent reporting periods, the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset.

For purchased or originated credit-impaired financial assets, the Group recognises interest income by applying the credit-adjusted effective interest rate to the amortised cost of the financial asset from initial recognition.

The calculation does not revert to the gross basis even if the credit risk of the financial asset subsequently improves so that the financial asset is no longer credit-impaired. Interest income is recognised in profit or loss.

For purchased or originated credit-impaired financial assets, the Group recognises interest income by applying the credit-adjusted effective interest rate to the amortised cost of the financial asset from initial recognition.

The calculation does not revert to the gross basis even if the credit risk of the financial asset subsequently improves so that the financial asset is no longer credit-impaired. Interest income is recognised in profit or loss.

iii) Foreign exchange gains and losses

The carrying amount of financial assets that are denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of each reporting period. Specifically;

- for financial assets measured at amortised cost that are not part of a designated hedging relationship, exchange differences are recognised in profit or loss:
- for debt instruments measured at FVTOCI that are not part of a designated hedging relationship, exchange differences on the amortised cost of the debt instrument are recognised in profit or loss. Other exchange differences are recognised in other comprehensive income in the investments revaluation reserve;
- for equity instruments measured at FVTOCI, exchange differences are recognised in other comprehensive income in the investments revaluation reserve.

iv) Impairment of financial assets

The Group recognises a loss allowance for expected credit losses on investments in debt instruments that are measured at amortised cost or at FVTOCI, lease receivables, trade receivables and contract assets, as well as on financial guarantee contracts. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Group always recognises lifetime ECL for trade receivables, contract assets and lease receivables. The expected credit losses on these financial assets are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Group recognises lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL

Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

Significant increase in credit risk

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument at the reporting date with the risk of a default occurring on the financial instrument at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort. Forward-looking information considered includes the future prospects of the industries in which the Group's debtors operate, obtained from economic expert reports, financial analysts, governmental bodies, relevant think-tanks and other similar organisations, as well as consideration of various external sources of actual and forecast economic information that relate to the Group's core operations.

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In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk for a particular financial instrument, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor, or the length of time or the extent to which the fair value of a financial asset has been less than its amortised cost;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- significant increases in credit risk on other financial instruments of the same debtor;
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligation;
- Irrespective of the outcome of the above assessment, the Group presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

Despite the foregoing, the Group assumes that the credit risk on a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have low credit risk at the reporting date. A financial instrument is determined to have low credit risk if:

(1) The financial instrument has a low risk of default,

(2) The debtor has a strong capacity to meet its contractual cash flow obligations in the near term, and

(3) Adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations.

v) Definition of default

The Group considers the following as constituting an event of default for internal credit risk management purposes as historical experience indicates that financial assets that meet either of the following criteria are generally not recoverable:

- when there is a breach of financial covenants by the debtor; or
- information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collateral held by the Group.

Irrespective of the above analysis, the Group considers that default has occurred when a financial asset is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

(vi) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

(a) significant financial difficulty of the issuer or the borrower;

(b) a breach of contract, such as a default or past due event;

(c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;

(d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(e) the disappearance of an active market for that financial asset because of financial difficulties.

(vii) Write-off policy

The Group writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are over law of limitation period past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. Any recoveries made are recognised in profit or loss.

(viii) Measurement and recognition of expected credit losses

The measurement of expected credit losses is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information as described above.

As for the exposure at default, for financial assets, this is represented by the assets' gross carrying amount at the reporting date; for financial guarantee contracts, the exposure includes the amount drawn down as at the reporting date, together with any additional amounts expected to be drawn down in the future by default date determined based on historical trend, the Group's understanding of the specific future financing needs of the debtors, and other relevant forward-looking information.

For financial assets, the expected credit loss is estimated as the difference between all contractual cash flows that are due to the Group in accordance with the contract and all the cash flows that the Group expects to receive, discounted at the original effective interest rate.

The Group recognises an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account.

(ix) Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument which the Group has elected on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments
An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognised at the proceeds received, net of direct issue costs.

Repurchase of the Group's own equity instruments is recognised and deducted directly in equity.

No gain or loss is recognised in profit or loss on the purchase, sale, issue or cancellation of the Group's own equity instruments.

Financial liabilities
All financial liabilities are measured subsequently at amortised cost using the effective interest method or at FVTPL.

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability, or (where appropriate) a shorter period, to the amortised cost of a financial liability.

Foreign exchange gains and losses
For financial liabilities that are denominated in a foreign currency and are measured at amortised cost at the end of each reporting period, the foreign exchange gains and losses are determined based on the amortised cost of the instruments. These foreign exchange gains and losses are recognised in the 'other gains and losses' line item in profit or loss.

The fair value of financial liabilities denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of the reporting period.

Derecognition of financial liabilities
The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

q) Investments
IAS 27 Separate Financial Statements contains accounting and disclosure requirements for investments in subsidiaries, joint ventures and associates when an entity prepares separate financial statements. The Standard requires an entity preparing separate financial statements to account for those investments at cost or in accordance with IFRS 9 Financial Instruments.

The investments represent the equity investments of the Group held at cost in the subsidiaries. These investments are carried at cost as there is no reliable measure of the fair value and regularly reviewed for impairment at each reporting date.

r) Provisions
Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and which a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the reporting date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

s) Retirement benefits and other employee benefits

(i) Defined benefit plan
For defined benefit retirement plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each annual reporting period. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected immediately in the statement of financial position with a charge or credit recognised in other comprehensive income in the period in which they occur. Remeasurement recognised in other comprehensive income is reflected immediately in accumulated funds and will not be reclassified to income or expenditure. Past service cost is recognised in income or expenditure in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are categorised as follows:
- Service cost (including current service cost, past service cost, as well as gains and losses on curtailments and settlements).
- Net interest expense or income.
- Remeasurement.

The retirement benefit obligation recognised in the statement of financial position represents the actual deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

(ii) Defined contribution plan
The Group and all its employees contribute to the National Pension Scheme, which is a defined contribution scheme. A defined contribution plan is a retirement benefit plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods.

(iii) Termination benefits
Employees on non-fixed term contract of employment (commonly known as "Permanent and Pensionable" employment) are entitled to long service termination benefits. The benefits are computed in accordance with accrued service period and the terminal pay. Provision is raised in profit or loss on a monthly basis.

A liability for a termination benefit is recognised at the earlier of when the entity can no longer withdraw the offer of the termination benefit and when the entity recognises any related restructuring costs.

(iv) Other entitlements
Employee entitlements to annual leave and contract gratuity are recognised when they accrue to employees. Accrued leave pay and gratuity is accounted for in income or expenditure as it arises.

4. Critical accounting judgements and key sources of estimation uncertainty
The preparation of financial statements in conformity with the Group's accounting policies which are described in note 3, requires the Directors to make judgements, estimates and assumptions about the carrying amount of assets and liabilities that are readily apparent from other sources. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results may differ from these estimates.

Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period

(continued)

of the revision and future periods if the revision affects both current and future periods.

a) Critical judgements in applying accounting policies

i) Income taxes

There are many transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. The Group recognises liabilities for anticipated tax based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact on the income tax and deferred tax provisions in the period in which such determination is made.

ii) Calculation of loss allowance

When measuring ECL the Group uses reasonable and supportable forward-looking information, which is based on assumptions for the future movement of different economic drivers and how these drivers will affect each other.

Loss given default is an estimate of the loss arising on default. It is based on the difference between the contractual cash flows due and those that the lender would expect to receive, taking into account cash flows from collateral and integral credit enhancements.

Probability of default constitutes a key input in measuring ECL. Probability of default is an estimate of the likelihood of default over a given time horizon, the calculation of which includes historical data, assumptions and expectations of future conditions.

iii) Significant increase in credit risk

As explained in note 2, ECL are measured as an allowance equal to 12-month ECL for stage 1 assets, or lifetime ECL for stage 2 or stage 3 assets. An asset moves to stage 2 when its credit risk has increased significantly since initial recognition. IFRS 9 does not define what constitutes a significant increase in credit risk. In assessing whether the credit risk of an asset has significantly increased the Group takes into account qualitative and quantitative reasonable and supportable forward looking information.

iv) Provision for obsolete inventory

The Group reviews is inventory to assess loss on account of obsolescence on a regular basis. In determining whether provision for obsolescence should be recorded in profit or loss, the Group makes judgements as to whether there is any observable data indicating that there is any future saleability of the product and the net realizable value for such product. Accordingly, provision for obsolescence is made where the net realizable value is less than cost based on best estimates by the management, ageing of inventories and historical movement of the inventory.

v) Capitalisation of borrowing costs

The Group capitalises borrowing costs directly attributable to the acquisition, construction or production of qualifying assets. Capitalisation of the borrowing costs relating to construction is suspended when the development is delayed as management reconsiders its detailed plans. Capitalisation of borrowing costs is recommenced at the resumption of the activities necessary to prepare the asset for its intended use.

vi) Judgement in identifying whether a contract includes a lease

The directors of the Group assess whether or not the Group has contracted for the rights to use the identified assets and whether the contract conveys the right to control the use of the identified assets for a period of time in exchange for consideration. The directors concluded that the Group has contracted for the rights to use the identified assets and that the contract conveys the right to control the use of the identified assets for a period of time in exchange for consideration, therefore the contracts do a contain lease.

b) Key sources of estimation uncertainty

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period. The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period.

i) Estimated useful lives and residual values of property, plant and equipment

The Group's management determines the estimated useful lives and related depreciation charge for its items of property, plant and equipment on an annual basis. The Group has carried out a review of the residual values and useful lives of property, plant and equipment as at 31 December 2017 and the management has not highlighted any requirement for an adjustment to the residual lives and remaining useful lives of the assets for the current or future periods.

ii) Contingencies

Appropriate recognition and disclosure of contingent liabilities is made regarding litigation, tax matters and environmental issues. Accounting for contingencies requires significant judgement by management regarding the estimated probabilities and ranges of exposure to potential loss. The evaluation of these contingencies is performed by various specialists inside and outside of the Group. The Group's assessment of the Group's exposure to contingencies could change as new developments occur or more information becomes available.

iii) Impairment of investments in joint ventures and associates

Investments in joint ventures and associates are reviewed for impairment at the reporting date. Determining whether an investment balance is impaired requires an estimation of the value in use of the joint venture or associate. The value in use calculation requires an estimate to be made of the timing and amount of future cash flows expected to arise from the joint venture or associate and the application of a suitable discount rate in order to calculate the present value. The discount rates used are based on the Group's weighted average cost of capital adjusted to reflect the specific economic environment of the joint venture or associate

iv) Actuarial valuation assumptions

The Group has a defined benefit pension scheme, the valuation of the net assets or liabilities involves accounting estimates arising from actuarial valuation based on assumptions. Actuarial assumptions made in determining the present obligation of retirement benefits.

v) Leases IFRS 16

In determining the right-of-use assets and lease liabilities a number of assumptions were made. The key assumptions include determining the Incremental Borrowing Rate which was used as discounting factor to determine the lease liability and interest expense.

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5. REVENUE

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Arose from customers in the following sections:				
Mining	11,839,462	10,962,907	11,839,633	10,962,907
Exports	4,090,453	2,440,240	4,090,453	2,440,240
Residential	2,854,211	2,327,551	2,854,211	2,327,551
Industrial and agricultural	2,427,699	2,169,100	2,427,699	2,169,100
Commercial (retail outlets)	685,620	576,730	685,620	576,730
I P Connectivity	104,580	-	-	-
	22,002,025	18,476,528	21,897,616	18,476,528

6. COST OF SALES

Local purchases of power	5,793,346	7,160,480	6,692,226	7,711,779
Direct labour costs	1,016,724	976,689	993,222	976,689
Local wheeling charges	1,018,365	661,034	1,018,365	661,034
Maintenance costs	960,920	246,373	926,879	314,173
Power imports (internally financed)	31,708	313,068	31,708	313,068
Generation water usage & fuel costs	316,622	138,247	251,663	193,585
Export wheeling charges	-	5,061	-	5,061
	9,137,685	9,500,952	9,914,063	10,175,389

The Group continued to buy power from Independent Power Producers (IPPs) to supplement the internal power generation, which was reduced due to low water levels. The cost of IPPs was partially financed by the Government of the Republic of Zambia due to higher tariff of about US$11/cents kWh, compared to the average selling price of US$7.5/cents kWh. The decrease in the cost of local power purchases was attributed to Maamba Collieries which faced operational challenges with one of its generating machines. The IPPs include Maamba Collieries Limited, Ndola Energy Company Limited and Itezhi Tezhi Power Corporation Limited whose average cost of power exceeds ZESCO's selling price to customers. During the year total disbursements from the Government of the Republic of Zambia was K160 million (2020: K740 million) towards power purchases.

7. OTHER OPERATING INCOME

Wheeling income	130,737	195,247	130,737	195,247
Amortisation of capital grants and contributions (Note 24)	196,677	187,031	196,677	187,031
Interest on late payments	159,326	136,317	159,326	136,317
Fibrecom income	-	105,031	-	105,031
Interest income	1,466	10,433	1,380	10,117
Rental income	2,212	2,129	2,212	2,129
Sundry income	320,889	1,821	369,284	211,927
	811,307	638,009	859,616	847,799

Notes to the Consolidated Financial Statements

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8. OTHER GAINS/(LOSSES)

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Net exchange gains/(losses)	8,774,077	(11,371,151)	7,520,110	(9,344,216)
Loss on disposal of property, plant and equipment	(28,286)	(1,875)	(14,227)	(1,875)
	8,745,791	(11,373,026)	7,505,883	(9,346,091)

The Zambian Kwacha appreciated against the US Dollar and other major convertible foreign currencies during the year.

The impact of the appreciation of the Zambian Kwacha during the year is that the Group recorded significant exchange gains on its foreign currency denominated liabilities.

The table below illustrates the movements in the US Dollar exchange rates during the period:

	Mid – market exchange rate as at 1 January 2021	Mid – market exchange rate as at 31 December 2021	Average appreciation during the year
Currency			
US Dollar (1 US$ =)	K21.165	K16.683	21%

9. OTHER EXPENSES

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Provision for bad debts	3,357,983	7,243,931	3,375,142	7,243,931
Other expenses	2,625,179	2,177,807	2,626,756	2,177,807
Impairment provision during the year (Note 17.1)	(253,908)	253,908	-	-
	5,729,254	9,675,646	6,001,898	9,421,738

10. FINANCE COSTS

These comprise the following:				
Interest paid on borrowings	954,867	783,653	866,048	729,631
Interest paid on overdraft	5,432	6,251	5,383	6,252
Interest on lease liabilities	3,540	5,192	3,540	5,192
	963,839	795,096	874,971	741,075

Notes to the Consolidated Financial Statements

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11. PROFIT/(LOSS) BEFORE TAX

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
Profit /(loss) before tax is stated after crediting:				
Amortisation of capital grants and capital contributions				
Profit /(loss) before tax is stated after crediting:	196,677	187,031	196,677	187,031
Interest income	1,466	10,433	1,380	10,117
and after charging:				
Net exchange gain/(losses) (note 8)	8,774,077	(11,371,151)	7,520,110	(9,344,216)
Employee benefits	3,957,456	3,544,414	3,910,965	3,544,414
Depreciation and amortisation (note 14 and 15)	1,984,821	1,957,183	1,920,785	1,891,168
Finance costs (Note 10)	963,839	795,096	874,971	741,075
Pension costs	102,694	102,207	100,268	102,207
Directors' fees				
- in connection with the management of the Group	21,890	18,289	21,890	18,289
- as Directors	8,286	4,652	1,965	4,652
Donations (Loss)/profit on disposal of property, plant and equipment	(28,573)	1,875	14,227	1,875

12. CURRENT TAX

Income tax charge at 35%				
Deferred taxation (note 13)	206,701	(5,834,973)	-	(4,336,601)
Deferred tax asset de-recognised during the year	-	4,996,408	-	4,996,408
Current tax	47,270	94,618	33,922	94,496
Income tax charge/(credit)	253,971	(743,947)	33,922	754,303

Subject to agreement with the Zambia Revenue Authority, the Group had estimated tax losses of K48.3 billion (2020: K24,612 billion) which are available for carry forward for a period of 10 years from the year in which they arose and for set off against future taxable profits. The cumulative tax losses comprise:

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
2020/2021 losses available until 2030 (K'000)	(13,821,114)	(48,338,403)	11,057,046	48,338,403

(continued)

GROUP

Tax year	Tax year expiry	Tax loss b/f amount	Utilised	Expired	Tax loss c/f
2013	2023	(140,459)	140,459	-	-
2014	2024	(277,648)	277,648	-	-
2015	2025	(1,849,669)	37,389	-	(1,812,279)
2016	2026	(3,084,293)	3,084,293	-	-
2017	2027	(9,249,269)	9,249,269	-	-
2018	2028	(9,584,099)	9,195,007	-	(389,093)
2019	2029	(3,133,334)	3,133,334	-	-
2020	2030	(23,963,589)	12,619,436	-	(11,344,153)
2021	2031	-	-	-	(275,589)
		(51,282,360)	37,736,835	-	13,821,114

COMPANY

Statement of tax losses

Tax year	Tax year expiry	Utilised in current period K'000	Tax loss utilized in period K'000	Tax loss carried forward K'000
2017	2027	(3,084,293)	3,084,293	-
2018	2028	(9,249,287)	9,249,287	-
2019	2029	(9,195,007)	9,195,007	-
2020	2030	(3,133,334)	3,133,334	-
2021	2031	(23,676,482)	12,619,436	(11,057,046)
		(48,338,403)	37,281,357	(11,057,046)

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
Included under current liabilities:				
Payable in respect of prior year	1,672,953	1,740,422	1,672,834	1,740,221
Arising during the year	47,270	94,618	33,922	94,496
Paid during the year	(407,243)	(162,087)	(407,122)	(161,883)
Payable at the end of year	1,312,980	1,672,953	1,299,634	1,672,834
Reconciliation of tax charge				
The total income tax expense for the year can be reconciled to the accounting profit/(loss) as follows:				
Profit/(loss) before tax	10,697,723	(16,701,596)	8,616,350	(14,840,586)
Applicable tax rate of 35%	3,744,203	(5,845,559)	3,015,723	(5,194,205)

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	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
Permanent differences:	(4,086,610)	(3,125,144)	(9,783,399)	(632,066)
- Capital exchange gains	596,378	1,527,226	6,801,598	1,584,166
- Other disallowable items	-	4,996,408	-	4,996,408
- De-recognised during the year	-	1,703,122	-	-
- *Tax rate adjustment	253,971	(743,947)	33,922	754,303

*The subsidiary, Kariba North Bank Extension Power Corporation Limited qualifies for the general investments incentives under the Zambia Development Agency Act No.11 of 2006 (the ""Act""). The Act offers a wide range of incentives in the form of allowances, exemptions and concessions for companies. The Act provides for investment thresholds that investors have to meet to qualify for fiscal and non-fiscal incentives.

The tax rate adjustment of Knil (2020: K1,703,421) relates to the effects of the tax payable/receivable in the future periods, as the subsidiary will be subject to tax at different rates in the future periods based on the investment incentives under the Zambia Development Agency (ZDA).

13. DEFERRED TAX

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
At the beginning of the year	(356,341)	712,831	-	(429,199)
Charge to equity	206,701	(230,608)	-	(230,608)
Credit to profit or loss for the year (Note 12)	-		-	(4,336,601
Derecognised during the year	-	(838,564)	-	4,996,408
At the end of the year	(149,640)	(356,341)	-	-

Deferred tax asset arising on temporary differences of ZESCO Limited was derecognised in 2020 as directors of the Group believe the asset is not recoverable.

The following are the major deferred tax liabilities (assets) recognised by the Group and their movements in the year:

GROUP

2020	Net unutilised tax losses K'000	Accelerated capital allowances K'000	Revaluation surplus K'000	Provisions and other K'000	Total K'000
At the beginning of the year restated	(9,526,631)	4,491,790	8,824,924	(3,077,252)	712,831
(Credit) /charge to profit or loss	(8,093,764)	(268,580)	-	2,527,371	(5,834,973)
Charge to equity	-	-	(230,608)	-	(230,608)
At the end of the year	(17,620,395)	4,223,210	8,594,316	(549,881)	(5,352,750)
2021					
At the beginning of the year	(17,620,395)	4,223,210	8,594,316	(549,881)	(5,352,750)
(Credit) /charge to profit or loss	(8,067,199)	(268,580)	-	2,541,618	(5,794,161)
Charge to equity	-	-	(230,608)	-	(230,608)
At the end of the year	(25,687,594)	3,954,630	8,363,708	1,991,737	(11,377,519)

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(continued)

GROUP

	2021 K'000	2020 K'000
Deferred tax asset	149,640	356,341
Deferred tax liability	-	-
At the end of the year	149,640	(356,341)

COMPANY

2020	Net tax losses K'000	Accelerated capital allowances K'000	Revaluation surplus K'000	Provisions and other items K'000	Total K'000
At the beginning of the year	(8,824,671)	2,875,166	8,599,729	(3,079,423)	(429,199)
(Credit) charge to profit or loss	(8,093,764)	1,229,792	-	2,527,371	(4,336,601)
Credit to equity	-	-	(230,608)	-	(230,608)
At the end of the year	(16,918,435)	4,104,958	8,369,121	(552,052)	(4,996,408)

Deferred tax asset arising on temporary differences of the Company was derecognised in the 2020 year as directors of the Company believed the asset was not recoverable

14. PROPERTY, PLANT AND EQUIPMENT

(a) SUMMARY - GROUP	Generation Systems	Transmission Systems	Distribution Systems	Civil works & buildings	Vehicle, Furniture & fittings equipment	Capital work in progress	Total
	K'000	K'000	K'000	K'000	K'000	K'000	K'000
Cost or valuation							
At 1 January 2020	4,995,482	12,234,610	12,915,534	9,554,503	4,331,781	27,179,363	71,211,273
Additions	3,715	-	257	223	80,313	17,127,553	17,212,061
Depreciation Capitalised	-	-	-	-	-	772	772
Transfer from Capital Work in Progress	422,395	1,038,645	272,172	393,757	728,862	(2,855,831)	-
Disposals	(245)	(2,551)	-	(1,497)	(10,535)	-	(14,828)
Reclassification to intangible assets	-	(23,867)	-	-	-	-	(23,867)
*Adjustments on assets	-	-	-	-	-	4,214	4,214
At 31 December 2020	5,421,347	13,246,837	13,187,963	9,946,986	5,130,421	41,456,071	88,389,625
Additions	68,020	933	-	343	152,019	4,656,546	4,877,861
Depreciation Capitalised	-	-	-	-	-	582	582
Exchange difference	-	-	-	-	-	(3,638,397)	(3,638,397)
Disposals	-	-	-	-	(4,946)	-	(4,946)
Transfers from Capital Works in Progress	11,464,364	340,231	579,253	560,806	65,884	(13,010,538)	-
Reclassification to intangible assets	-	-	-	-	1,357	-	1,357
Adjustment on assets	-	-	-	-	(348)	(2,249)	(2,597)
At 31 December 2021	16,953,731	13,588,001	13,767,216	10,508,135	5,344,387	29,462,015	89,623,485

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(continued)

SUMMARY - GROUP	Generation Systems	Transmission Systems	Distribution Systems	Civil works & buildings	Vehicle, Furniture & fittings equipment	Capital work in progress	Total
	K'000	K'000	K'000	K'000	K'000	K'000	K'000
DEPRECIATION							
At 1 January 2020	374,689	1,126,303	1,334,737	629,737	653,795	-	4,119,261
Charge for the year	206,521	580,823	678,556	328,274	154,362	-	1,948,536
Eliminated on disposal	(41)	(416)	(110)	(695)	(8,177)	-	(9,439)
At 31 December 2020	581,169	1,706,710	2,013,183	957,316	799,979	-	6,058,358
Charge for the year	215,488	606,486	617,999	335,059	199,324	-	1,974,356
Eliminated on disposal	-	-	-	-	(1,711)	-	(1,711)
Prior year adjustment	-	-	-	-	265	-	265
At 31 December 2021	796,657	2,313,196	2,631,182	1,292,375	997,858	-	8,031,268
CARRYING AMOUNT							
At 31 December 2021	16,157,074	11,274,805	11,136,034	9,215,760	4,346,529	29,462,015	81,592,217
At 31 December 2020	4,840,179	11,540,127	11,174,780	8,989,670	4,330,441	41,456,071	82,331,268

*Adjustments arise from the fixed assets which were captured under revaluation of assets and yet they were still captured under Capital Works in Progress.

(continued)

(b) SUMMARY - COMPANY	Generation Systems	Transmission Systems	Distribution Systems	Civil works & buildings	Vehicle, Furniture & fittings equipment	Capital work in progress	Total
	K'000	K'000	K'000	K'000	K'000	K'000	K'000
Cost or valuation							
At 1 January 2020	3,743,966	12,234,610	12,915,534	8,289,702	4,308,874	9,585,401	51,078,087
Additions	-	-	257	223	70,730	4,155,079	4,226,289
Disposals	(245)	(2,551)	-	(1,497)	(9,768)	-	(14,061)
Transfers from Capital Works In Progress	422,395	1,038,645	272,172	393,757	728,862	(2,855,831)	-
Reclassification to intangible assets (Note 15)	-	(23,867)	-	-	-	-	(23,867)
At 31 December 2020	4,166,116	13,246,837	13,187,963	8,682,185	5,098,698	10,884,649	55,266,448
Additions	1,488	933	-	343	136,093	3,366,447	3,505,304
Disposals	-	-	-		(4,946)	-	(4,946)
*Transfer to Fibrecom	-		-		(14,871)	-	(14,871)
Transfers from Capital Works In Progress	20,937	340,231	579,253	283,749	65,884	(1,290,054)	-
Reclassification to intangible assets (Note 15)	-	-	-	-	1,357	-	1,357
Adjustments	-	-	-	-	(348)	(2,519)	(2,867)
At 31 December 2021	4,188,541	13,588,001	13,767,216	8,966,277	5,281,867	12,958,523	58,750,425
Cost/valuation							
Cost	972,242	7,705,351	5,724,106	90,175	5,281,867	12,958,523	32,732,264
Valuation (1996)	177,987	-	1,281,611	51,779	-	-	1,511,377
Valuation (2001)	191,640	-	-	153,854	-	-	345,494
Valuation (2017)	2,846,672	5,882,650	6,761,499	8,670,469	-	-	24,161,290
At 31 December 2021	4,188,541	13,588,001	13,767,216	8,966,277	5,281,867	12,958,523	58,750,425

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(continued)

SUMMARY - COMPANY	Generation Systems	Transmission Systems	Distribution Systems	Civil works & buildings	Vehicle, Furniture & fittings equipment	Capital work in progress	Total
	K'000	K'000	K'000	K'000	K'000	K'000	K'000
DEPRECIATION							
At 1 January 2020	338,886	1,126,303	1,334,737	606,950	646,296	-	4,053,172
Charge for the year	170,145	580,823	678,556	302,949	151,119	-	1,883,592
Eliminated on disposals	(41)	(416)	(110)	(695)	(7,778)	-	(9,040)
At 31 December 2020	508,990	1,706,710	2,013,183	909,204	789,637	-	5,927,724
Charge for the year	179,756	606,486	617,999	313,690	192,425	-	1,910,356
Transfer to Fibrecom	-	-	-	-	(3,432)	-	(3,432)
Eliminated on disposals	-	-	-	-	(1,711)	-	(1,711)
At 31 December 2021	688,746	2,313,196	2,631,182	1,222,894	976,919	-	7,832,937
CARRYING AMOUNT							
At 31 December 2021	3,499,795	11,274,805	11,136,034	7,743,383	4,304,948	12,958,523	50,917,488
At 31 December 2020	3,657,126	11,540,127	11,174,780	7,772,981	4,309,061	10,884,649	49,338,724

(c) Fair valuation measurement

The Group's Civil engineering works, generation plants and transmission and distribution systems and leasehold buildings are stated at their revalued amounts, being their fair value at the date of revaluation, less any subsequent accumulated depreciation. The fair value measurement of the Group's civil engineering works and buildings and generation plants and transmission and distribution systems as at 31 December 2017 were performed by Messrs Multiconsult United Kingdom and Upmarket Property Consultants respectively, independent valuers not related to the Group.

The information below shows the valuation techniques used as well as the significant inputs used.

(continued)

Property, plant and equipment	Valuation technique	Description of valuation technique	Observable inputs
Freehold land and buildings	Market based approach - Direct Comparable Method (DCM) and Depreciated Replacement Cost (DRC)	Direct Comparable method renders an estimate of value through comparison with other similar available properties which have recently transacted in the vicinity in an attempt to discern the actions of buyers and sellers active in the market place. The current market value is built up from the Land and improvement values of the buildings derived from comparable transactions. Considerations were made with reference to; Location factor, time of sale, accessibility, quality, prevailing economic property trends. The Depreciated Replacement Cost method determines the present market value of the subject property by estimating the present cost of replacing the building(s) by estimating the total amount of accrued depreciation from all causes, namely physical deterioration, functional obsolescence and external obsolescence, subtracting the accrued depreciation from the present replacement costs, estimating the value of minor improvements and adding the site value to the depreciated cost of the building(s). This method was used where there was no market-based evidence of fair value because of the specialised nature of the item of property, plant and equipment and the item is rarely sold, except as part of a continuing business. The DRC method requires that, for each asset under consideration, a value be obtained for a modern equivalent asset (MEA), that being an asset that can reasonably provide like-for-like benefits of the asset under consideration. Transmission line asset prices were obtained from recent ZESCO transmission line projects pricing schedules. An additional 3% on-costs was added to account for the Owner's costs. Line costs were priced per unit length and according to terrain type (flat, hilly and swampy). Distribution equipment pricing data was obtained from recent ZESCO in-house pricing data. Unit installed prices (material and labour) per length of overhead line and underground cable was calculated from these data and a further 100% on-costs were added.	
Transmission and distribution systems	Depreciated Current Replacement Value (DCRV)	The DRC method requires that, for each asset under consideration, a value be obtained for a modern equivalent asset (MEA), that being an asset that can reasonably provide like-for-like benefits of the asset under consideration. Transmission line asset prices were obtained from recent ZESCO transmission line projects pricing schedules. An additional 3% on-costs was added to account for the Owner's costs. Line costs were priced per unit length and according to terrain type (flat, hilly and swampy). Distribution equipment pricing data was obtained from recent ZESCO in-house pricing data. Unit installed prices (material and labour) per length of overhead line and underground cable was calculated from these data and a further 100% on-costs were added.	Market prices, exchange rates, discounted rate

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Details of the Group's civil engineering works and buildings, generation plants and transmission and distribution systems and information about the fair value hierarchy as at the end of the reporting period are as follows:

	Level 1	Level 2	Level 3	Fair value as at 31 December 2021
	K'000	K'000	K'000	K'000
Civil Engineering works and buildings	-	-	3,082,716	3,082,716
Generation plants	-	10,587,661	-	10,587,661
Transmission and distribution systems	-	7,476,703	-	7,476,703

	Level 1	Level 2	Level 3	Fair value as at 31 December 2020
	K'000	K'000	K'000	K'000
Civil Engineering works and buildings	-	-	4,647,095	4,647,095
Generation plants	-	12,796,509	-	12,796,09
Transmission and distribution systems	-	7,682,752	-	7,682,752

The fair value measurements for intangible asset have been categorised as Level 3 fair values based on the inputs to the valuation technique used.

There were no transfers be tween fair value levels during the year.

(d) Historical cost basis

Had the Group's civil engineering works and buildings, generation plants and transmission and distribution systems been measured on a historical cost basis, their carrying amounts would have been as follows:

	2021	2020
	K'000	K'000
Civil Engineering works and buildings	318,200	334,011
Generation plants	527,255	550,876
Transmission and distribution systems	11,244,661	11,397,499
	12,090,116	12,282,386

(e) Sensitivity analysis

The significant inputs include the estimated construction costs and other ancillary expenditure. A slight increase in the depreciated factor would result in a significant decrease in the fair value of the buildings and civil engineering works, and a slight increase in the estimated construction costs would result in a significant increase in the fair value of the buildings, and vice versa.

(f) Useful lives

In the opinion of the Directors there are no major components of Property, Plant and Equipment which have different useful lives that would require to be depreciated separately and allocated separate residual values.

(g) Fixed assets register

In accordance with Section 248 of the Companies Act, 2017, the register of Land and Buildings is available for inspection by members and their duly authorised agents at the Registered records office of the Group.

(h) Assets Held as Security

During the year under review, the Group procured motor vehicles valued at K91 million under an ABSA asset financing lease facility. The motor vehicles were used as security in the transaction.

15. INTANGIBLE ASSET

	Group		Company	
	2021 K'000	2020 K'000	2021 K'000	2020 K'000
Cost				
At the beginning of the year	108,801	84,553	108,659	84,411
Additions	2,541	381	2,524	381
Reclassification of intangible assets from PPE (note 14)	(1,357)	23,867	(1,357)	23,867
At the end of the year	109,985	108,801	109,826	108,659
Accumulated amortisation				
At the beginning of the year	24,128	16,520	24,096	16,520
Amortisation expense	10,465	7,608	10,429	7,576
At the end of the year	34,593	24,128	34,525	24,096
Carrying amounts:				
At the end of the year	75,392	84,673	75,301	84,563

The following useful lives are used in the calculation of amortisation:

Significant intangible assets

The intangible assets consists of oracle software and the business information systems.

The Group's intangible assets are stated at their revalued amounts, being their fair value at the date of revaluation, less any subsequent accumulated amortisation. The fair value measurement of the Group's intangible assets as at 31 December 2017 were performed by Messrs Multiconsult United Kingdom, independent valuers not related to the Group.

The information below shows the valuation techniques used as well as the significant inputs used.

Intangible assets	Valuation technique	Description of valuation technique	Observable inputs
Oracle software and other related software	Current Replacement cost	The method determines the amount that Group would have to pay to replace an asset at the present time, according to its current worth of the software on the market.	Not applicable

(continued)

	Level 1 K''000	Level 2 K'000	Level 3 K'000	Fair value at 31 December 2021 K'000
Intangible assets	-	-	75,392	75,392

	Level 1 K''000	Level 2 K'000	Level 3 K'000	Fair value at 31 December 2020 K'000
Intangible assets	-	-	84,673	84,673

The fair value measurements for intangible asset have been categorised as Level 3 fair values based on the inputs to the valuation technique used.

There were no transfers between fair value levels during the year.

16. RIGHT OF USE ASSETS

	Group		Company	
	2021 K'000	2020 K'000	2021 K'000	2020 K'000
Cost				
At the beginning of the year	26,253	27,652	26,253	27,652
Additions	18,442	2,673	11,079	2,673
Termination of lease	(1,490)	(4,072)	(1,490)	(4,072)
At the end of the year	43,205	26,253	35,842	26,253
Accumulated depreciation				
At the beginning of the year	18,243	10,519	18,243	10,519
Charge for the year	14,386	9,321	9,160	9,321
Termination of Lease	(6,306)	(1,597)	(6,306)	1,597
At the end of the year	26,323	18,243	21,097	18,243
Carry amounts:				
At the end of the year	16,882	8,010	14,745	8,010

The Group leases mainly building assets with an average lease term of 5 years. The Group has an option to purchase certain buildings it currently occupies at market value.

Most of the lease agreements which run for one year are renewed on an annual basis for the same period.

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17. INVESTMENTS IN SUBSIDIARIES AND ASSOCIATES

Name of subsidiary	Principle activity	Place of incorporation and principle place of business	Proportion of ownership interest/voting rights held by the Group
Kariba North Bank Extension Power Corporation Limited	Generation and supply of electricity	Zambia, Lusaka	100%
Kafue Gorge Lower Power Development Corporation Limited	Construction of the power generation facility	Zambia, Lusaka	100%
Fibrecom Limited	Provision of IP connectivity	Zambia, Lusaka	100%
Kalungwishi Hydro Power Company Limited	Construction of the Power generation facility	Zambia, Lusaka	100%

17.1. INVESTMENTS IN SUBSIDIARIES AND ASSOCIATES

	Name and nature of investment	Principle activity	Place of incorporation and principle place of business	Proportion of ownership interest/voting rights held by the Group
(i)	Itezhi Itezhi Power Corporation Limited (Joint Venture)	Generation and supply of electricity	Zambia, Lusaka	50%
(ii)	El Sewedy Electric Zambia Limited (Associate)	Manufacturing of distribution transformers ranging from 25kv to a maximum of 5,000kv (5mva)	Zambia, Lusaka	40%
(iii)	Zambia Electrometer Limited (Associate)	Manufacture of electricity meters and compact fluorescent lights.	Zambia, Lusaka	40%

All the above associates and joint venture are accounted for using the equity method in these consolidated financial statements.

Summarised financial information in respect of each of the Group's material associates is set out below.

The summarised financial information below represents amounts shown in the associate's financial statements prepared in accordance with the IFRS's adjusted by the Group for equity accounting purposes.

(continued)

(i) Itezhi Power Corporation Limited (Joint Venture)

	2021	2020
	K'000	**K'000**
At the beginning of the year	-	308,810
Share of loss for the year	(25,561)	(54,902)
	(25,561)	253,908
Impairment provision during the year	253,908	(253,908)
At the end of the year	228,347	-
Statement of financial position:		
Current assets	2,846,906	3,110,860
Non-current assets	1,614,015	1,676,156
Current liabilities	1,678,359	1,448,086
Non- current liabilities	2,481,912	3,657,045
Net (liabilities) assets of the joint venture	300,650	(318,115)
Proportion of the Group's ownership	50%	50%
Group share of net assets/(liabilities)	150,325	(159,057)
Statement of comprehensive income:	1,934,936	1,828,315
Revenue	(1,646,989)	1,336,300
Net exchange gains	(51,112)	(109,804)
Total comprehensive loss for the year	(51,122)	(109,804)
Proportion of the Group's ownership	50%	50%
Group share of joint venture's loss for the year	(25,561)	(54,902)

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(ii) El Sewedy Electric Zambia Limited (Associate)

	2021	2020
	K'000	**K'000**
At the beginning of the year	60,269	51,525
Share of (loss)/profit for the year	(18,972)	8,744
At the end of the year	41,297	60,269
Statement of financial position:		
Current assets	224,246	319,583
Non-current assets	152,890	187,689
Current liabilities	88,085	172,125
Non- current liabilities	4,629	25,417
Net assets of the joint venture	284,422	309,731
Proportion of the Group's ownership	40%	40%
Group share of net assets	113,769	123,892
Statement of comprehensive income:		
Revenue	247,077	250,781
Profit for the year	68,357	24,888
Total comprehensive income for the year	(47,429)	21,860
Proportion of the Group's ownership	40%	40%
Group share of associate's (loss)/profit for the year	(18,972)	8,744

(iii) Zambia Electrometer Limited (Associate)

	2021	2020
	K'000	**K'000**
At the beginning of the year	26,303	26,490
Share of loss for the year	(6,864)	(187)
At the end of the year	19,439	26,303
Statement of financial position		
Current assets	388	8,740
Non-current assets	5,950	6,207
Current liabilities	120,006	111,456
Non- current liabilities	3,181	3,181
Net liabilities of the associate	(116,849)	(99,691)
Proportion of the Group's ownership	40%	40%
Group share of net liabilities	(46,740)	(39,876)

(continued)

Statement of comprehensive income:		
Revenue	-	301
Profit for the year	-	-
Total comprehensive loss for the year	(17,159)	(467)
Proportion of the Group's ownership	40%	40%
Group share of associate's loss for the year	(6,864)	(187)
Summary of associates position:		
At the beginning of the year	75,827	67,270
Share of profit and loss for the year:		
El Sewedy Electric Zambia Limited	(18,972)	8,744
Zambia Electrometer Limited	(6,864)	(187)
	(25,836)	8,557
Total closing position for both associates	49,991	75,827

18. INVENTORIES

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Materials	989,498	845,980	850,017	776,764
Fuel and lubricants	17,510	15,199	17,510	15,199
Spares	62,261	14,687	62,261	14,686
Goods in transit	9,049	-	9,049	-
	1,078,318	875,866	938,837	806,649
Allowance for obsolescence	(204,855)	(101,968)	(204,855)	(101,968)
	873,463	773,898	733,982	704,681

The cost of inventories recognised as an expense during the year was K261 million (2020: K278 million).

Inventories are disclosed net of provision for obsolete stock amounting to K205 million (2020: K102 million).

(continued)

19. TRADE AND OTHER RECEIVABLES

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
The balance comprises:				
Gross trade receivables	17,457,206	17,168,239	17,325,816	17,168,239
Impairment allowance	(16,566,155)	(13,806,721)	(16,497,293)	(13,806,721)
	891,051	3,361,518	828,523	3,361,518
Other receivables				
Other receivables	1,272,047	962,177	1,205,591	943,653
Staff receivables	48,192	36,882	47,959	36,882
Allowance for doubtful debts	(86,700)	(111,425)	(86,700)	(111,425)
	1,223,539	887,634	1,166,850	869,110
Total trade and other receivables	2,124,590	4,249,152	1,995,373	4,230,628
The movement in allowance for doubtful trade receivables is as follows:				
Balance at the beginning of the year	13,806,721	6,423,684	13,806,721	6,423,684
Charge for the year	2,759,434	7,383,037	2,690,572	7,383,037
At the end of the year	16,566,115	13,806,721	16,497,293	13,806,721
The movement in allowance for doubtful debts for other receivables is as follows:				
Balance at the beginning of the year	111,425	610,260	111,425	610,260
Impairment losses recognised on other receivables	12,210	196,489	12,210	196,489
Reversal of impairment losses recognised on other receivables	(36,935)	(695,324)	(36,935)	(695,324)
At the end of the year	86,700)	111,425	86,700	111,425

The following tables detail the risk profile of trade receivables based on the Group provision matrix. As the Groups' historical credit loss experience shows significantly different loss patterns for different customer segments, the provision for loss allowance based on past due status is not further distinguished between the companies different customer bases.

(continued)

GROUP

	Not past due	0-30 past due	31-60 past due	61-90 past due	More than 90 days past due	Total
	K'000	K'000	K'000	K'000	K'000	K'000
31 December 2021						
Expected credit loss rate	0%	83%	84%	68%	98%	95%
Estimated total gross carrying Amount at default	-	1,126,689	926,711	625,194	14,778,612	17,457,206
Lifetime ECL	-	(918,867)	(774,163)	(422,034)	(14,451,091)	(16,566,155)
	-	207,822	152,548	203,160	327,521	891,051
31 December 2020						
Expected credit loss rate	0%	-40%	-55%	-84%	-87%	-80%
Estimated total gross carrying Amount at default	-	1,523,627	1,037,994	760,021	13,846,598	17,168,239
Lifetime ECL	-	(609,451)	(570,896)	(638,418)	(11,987,956)	(13,806,721)
	-	914,176	467,098	121,603	1,858,642	3,361,518

COMPANY

	Not past due	0-30 past due	31-60 past due	61-90 past due	More than 90 days past due	Total
	K'000	K'000	K'000	K'000	K'000	K'000
31 December 2021						
Expected credit loss rate	0%	83%	84%	68%	98%	95%
Estimated total gross carrying Amount at default	-	1,101,719	919,155	619,179	14,685,763	17,325,816
Lifetime ECL	-	(918,867)	(774,163)	(422,034)	(14,382,229)	(16,497,293)
Net balance	-	182,852	144,992	197,145	303,534	828,523
31 December 2020						
Expected credit loss rate	0%	40%	55%	84%	87%	80%
Estimated total gross carrying Amount at default	-	1,523,627	1,037,994	760,021	13,846,597	17,168,239
Lifetime ECL	-	(609,451)	(570,896)	(638,418)	(11,987,956)	(13,806,721)
Net balance	-	914,176	467,098	121,603	1,858,641	3,361,518

(continued)

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Ageing of past due but not impaired trade receivables				
0- 30 days	207,822	914,176	182,852	914,176
30 - 60 days	152,548	467,098	144,992	467,098
60 - 90 days	203,160	121,603	197,145	121,603
Over 90 days	327,521	1,858,641	303,534	1,858,641
	891,051	3,361,518	828,523	3,361,518

The average credit period on sales of goods is 60 days. Penalties are charged for late payment on mining customers.

The Group measures the loss allowance for trade receivables at an amount equal to lifetime ECL. The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the debtors, general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecast direction of conditions at the reporting date. The Group has recognised a loss allowance of 98% against all receivables over 90 days past due because historical experience has indicated that these receivables are generally not fully recoverable.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or when the trade receivables are over two years past due, whichever occurs earlier. None of the trade receivables that have been written off is subject to enforcement activities.

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Age of impaired trade receivables				
0- 30 days	918,867	609,451	918,867	609,451
30 - 60 days	774,163	570,896	774,163	570,896
60 - 90 days	422,034	638,418	422,034	638,418
Over 90 days	14,451,091	11,987,956	14,382,229	11,987,956
	16,566,155	13,806,721	16,497,293	13,806,721

Trade Receivables placed as Security

Part of Copperbelt Energy Corporation Limited (CEC) receivables have been assigned as security for China Exim Bank Loan which was procured to finance the construction Kariba North Bank Power Extension Corporation Limited generating plant. The Kalumbila Minerals Limited receivables have been assigned 100% towards the Power Purchases from Maamba Collieries Limited. Mpande Limestome Limited receivables have been assigned to Geria International Loan, while part of Lumwana Mining Group Limited receivables have been assigned to ZTE loan for the Fibre metropolitan project. San He Manufacturing (Z) Limited receivables have been assigned to Industrial Development Corporation Limited Shareholder as part of security for the loan obtained as equity for construction of the 750 MW Kafue Gorge Lower Power Project.

(continued)

20. SHARE CAPITAL

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
Authorised 2,500,000,000 ordinary shares of K2 each	5,000,000	5,000,000	5,000,000	5,000,000
Issued and fully paid 1,412,559,015 ordinary shares of K2 each	2,825,118	2,825,118	2,825,118	2,825,118

There was no change to Group's and Company share capital during the year.

21. RELATED PARTY TRANSACTIONS

The Group's immediate and ultimate holding Group is Industrial Development Corporation Zambia Limited incorporated in Zambia and owned and controlled by the Government of the Republic of Zambia. During the year the Group carried out transactions with related parties as detailed below:

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
i) Trading transactions				
Rendering of services	31,637	37,268	409,391	400,761
Purchases of services	155,827	24,797	(3,065,356)	(2,521,923)
ii) Amounts due from related parties				
Government of the Republic of Zambia	3,500,333	4,654,514	3,500,333	4,654,514
Itezhi tezhi Power Corporation Limited (ITTPC) incorporated in Zambia	819,831	910,621	819,831	910,621
Zambia Electrometer Limited, incorporated in Zambia	34,588	27,491	34,588	27,490
Kariba North Bank Extension Power Corporation Limited	-	-	31,459	6,303
Rural Electrification Authority (b)	8,418	13,785	8,418	13,785
Allowance for doubtful debts (a)	(486,284)	(628,541)	(486,284)	(628,541)
	3,876,886	4,977,870	3,908,345	4,984,172

a) Year end balances

The movement in allowance for doubtful debts in respect of the amounts due from related parties is as follows:

Balance at beginning of year	628,541	520,367	628,541	520,367
Charge for the year	(142,257)	108,174	(142,257)	108,174
At end of the year	486,284	628,541	486,284	628,541

(continued)

Rural Electrification Authority is a Government spending agency charged with the responsibility of electrifying the Rural Areas of the Country. The Authority engages ZESCO Limited to undertake certain projects on it's behalf and in turn the Authority pays ZESCO for the works undertaken.

The amounts outstanding are unsecured and will be settled in cash. No guarantees have been given or received. A provision for doubtful debts in respect of amounts due from related parties amounting to K486 million (2020: 628 million) was made during the year.

The amounts outstanding are unsecured and will be settled in cash. No guarantees have been given or received. A provision for doubtful debts in respect of amounts due from related parties amounting to K486 million (2020: K628 million) was made during the year.

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
b) Amounts due to related parties				
Itezhi Tezhi Power Corporation Limited (ITTPC) incorporated in Zambia (b)	9,707,684	9,139,726	9,707,684	9,139,726
Kariba North Bank Extension Power (Corporation incorporated in Zambia (a)	-	353,584	526,338	1,036,848
Kafue Gorge Power Development Corp Ltd (a)	-	-	227,487	-
Elsewedy Electric Zambia Limited (c)	103,359	181,009	103,359	181,011
	9,811,043	9,674,319	10,564,868	10,357,585

1. Kariba North Bank Extension Power Corporation Limited and Kafue Gorge Lower Corporation are subsidiary companies,
2. Itezhi Tezhi Power Corporation is a joint venture investment with 50% shareholding.
3. Elsewedy Electric Zambia Limited is an associate with 40% shareholding.

c) Key management personnel remuneration				
Key management remuneration	33,248	18,289	21,890	18,289
Directors fees	5,981	4,652	1,965	4,652
	39,229	22,941	23,855	22,941

22. BORROWINGS

The movement on loans is as follows:

At the beginning of the year	46,681,713	30,014,267	26,255,300	16,976,335
Borrowings arising during the year	2,559,816	4,151,670	2,601,997	3,421,927
Net exchange (gains)/losses	(9,958,658)	15,164,029	(5,699,555)	8,374,309
Repayments made during the year	(4,189,345)	(2,648,253)	(3,329,549)	(2,517,271)
Balance at the end of the year	35,093,526	46,681,713	19,828,193	26,255,300
The borrowings are repayable as follows:				
On demand or within one year	1,775,268	3,974,751	2,157,293	3,801,369
Loans payable within 1 to 2 years	17,310,376	3,032,653	1,663,018	3,030,324
Loans payable within 3-5 years	5,072,500	7,724,047	5,072,500	7,724,246
Loans payable over 5 years	10,935,382	31,950,262	10,935,382	11,699,361
Total	35,093,526	46,681,713	19,828,193	26,255,300

(continued)

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
Disclosed as				
Due after one year	33,318,258	42,706,962	17,670,900	22,453,931
Due within one year	1,775,268	3,974,751	2,157,293	3,801,369
Total	35,093,526	46,681,713	19,828,193	26,255,300

The borrowings are due to the following:

i) Industrial Commercial Bank of China and the Export Import Bank of China	15,647,358	19,527,114	-	-
ii) Industrial Development Corporation Shareholder Loan	3,169,826	2,612,070	3,169,826	2,613,751
iii) Industrial Commercial Bank of China	3,134,025	4,520,010	3,134,025	4,520,010
vi) China Exim Bank	1,786,434	2,832,993	1,786,434	2,832,993
v) Nordea Stanbic Bank	1,572,442	2,208,227	1,572,442	2,208,227
vi) DBSA - Loan Kafue Gorge Hydro Power Station	1,412,365	1,791,825	1,412,365	1,791,825
vii) GRZ/International Development Agency	1,339,167	1,438,098	1,339,167	1,438,098
viii) DBSA - Kariba North Bank Hydro Power Station Corporation Limited	-	898,652	-	-
ix) GRZ/China Exim Bank	751,827	953,820	751,827	953,820
x) European Investment Bank - LTDRP Loan facility	718,365	660,240	718,365	660,240
xi) GRZ/International Development Association - Kafue Muzuma	693,879	880,305	693,879	880,305
xii) European Investment Bank	689,927	875,289	689,927	875,289
xiii) African Development Bank	605,644	755,465	605,644	755,465
xiv) GRZ/Agence Francaise De Development	485,396	728,097	485,396	728,097
xv) Industrial Commercial Bank of China Facility-Mpika Transmission	443,039	586,509	443,039	586,509
xvi) Industrial Commercial Bank of China Facility Loan – Musonda Falls	422,724	585,052	422,724	585,052
xvii) Industrial Commercial Bank of China Facility-Chipata-Lundazi	410,198	567,716	410,198	567,716
xviii) Kafue Gorge Limited – Bridge Loan	-	-	382,026	-
xix) GRZ/Japan International Cooperation Agency	300,336	386,817	300,336	386,817
xx) India Exim Bank Loan 2	280,388	393,164	280,388	393,164
xxi) European Investment Bank	235,196	298,386	235,196	298,386
xxii) China Machinery Engineering Corporation Limited	213,232	312,852	213,232	312,852
xxiii) Nigeria Trust Fund	134,636	128,191	134,636	128,191
xxiv) China Exim Bank-Ii Kabwe-Pensulo	127,448	161,690	127,448	161,690
xxv) Geria International Investments Llc (i)	116,547	190,490	116,547	190,490
xxvi) Geria International Investments Llc (ii)	116,782	190,490	116,782	190,490
xxvii) GRZ/World Bank	73,619	93,398	73,619	93,398
xxviii) ABSA - Vehicle Asset Lease	65,219	-	65,219	-
xxix) Agency Francaise de Development	56,617	78,015	56,617	78,015
xxx) GRZ/World Bank Facility 2	54,016	68,528	54,016	68,528
xxxi) CNMC Industrial Zone Development	24,736	47,071	24,735	47,072

Notes to the Consolidated Financial Statements

for the year ended 31 December 2021

(continued)

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
xxxii) Mpande Limestone Limited - Bridging Finance	12,138	88,009	12,138	88,009
xxxiii) Standard Chartered Bank	-	1,032,881	-	1,032,881
xxxiv) Zanaco $20 Million Short Term Facility	-	335,758	-	335,758
xxxv) India Exim Bank Loan 1	-	286,228	-	286,228
xxxvi) Development Bank of Southern Africa Bank 1	-	67,208	-	64,879
xxxvii) Standard Bank of South Africa	-	62,583	-	62,583
xxxviii) European Investment Bank 2	-	38,472	-	38,472
	35,093,526	46,681,713	19,828,193	26,255,300

Summary of the arrangements:

i. Industrial Commercial Bank of China and the Export Import Bank of China

On 13 November 2017, a facility agreement of up to US$1,530,576,039 was signed between Kafue Gorge Lower Power Development Corporation Limited, Industrial and Commercial Bank of China Limited and The Export-Import Bank of China. Drawdowns had only begun after the financial close was achieved in June 2018. Interest is 3.2% Margin plus 6 months LIBOR (Screen Rate) paid semi-annually. The Loan will be repaid over 10 years. The loan is denominated in United States Dollar and as at 31 December 2021 KGL had drawn down a total of $948,848,018 (2020: $932,015,102).

ii. IDC / ZPC Shareholder Loan

This is a US$190 million loan facility obtained from the Industrial Development Corporation (IDC) and Zambia Power Corporation (ZPC) by ZESCO Limited on 19 May 2020. The loan facility was obtained to finance ZESCO Limited Equity into Kafue Gorge Lower Hydro Power Corporation (KGL). The interest is at 10% fixed paid semi-annually with a grace period of three years. The loan facility is denominated in United States Dollars and will be rapaid within 23 years including the grace period of three years. The balance at the reporting date was US$189.999 million or K3.1698 billion.

iii. Industrial and Commercial Bank of China

This is a US$285 million loan facility obtained from Industrial and Commercial Bank of China on 30 May 2011 to finance the Pensulo-Msoro-Chipata West 330 KV and Pensulo-Kasama 330 kV Transmission lines. Interest is 2.5% Margin plus LIBOR (Screen Rate), the Loan will be repaid over 10 years. The loan is denominated in United States Dollar and the balance at the reporting date was US$187.85 million or K3.134 billion.

iv. China Exim Bank

This is a US$315.6 million loan facility obtained from China Exim Bank in October 2008 with tenure of 15 years. Interest is computed at LIBOR plus 2% per annum. The facility is secured by receivables from Copperbelt Energy Corporation Plc and Chambeshi Copper Mining Group. The loan is denominated in United States Dollar and as at reporting date, the loan balance was US$107.079 million or K1.786 billion.

v. Nordea Stanbic Bank

This is a US$133 million loan facility obtained from Nordea bank on 14 August 2014. The loan was obtained to finance the connection of North Western Province to the National Grid. The loan shall be repaid over a 14 year period including a grace period of 2 years. The interest rate is 3.69% per annum fixed payable semi-annually. The loan facility is in United States Dollar and the balance at the reporting date was US$94.2524 million or K1.572 billion.

vi.Development Bank of Southern Africa (DBSA) (KGL)

This is a US$100 million loan facility obtained from Development Bank of Southern Africa (DBSA) on 4 May 2016 to finance the Kafue Gorge Lower Hydro Power Project. Interest is charged at 9.4% plus 6 month Libor, semi-annum and the loan (principal plus interest) will be repaid over 15 years including 2 years grace period. The loan is denominated in United States Dollar. The loan balance at the reporting date was US$84.66 million or K1.412 billion.

vii. GRZ/International Development Agency

This is a US$105 million loan facility obtained from the International Development Association on 3 October 2013 by the Government of the Republic of Zambia and on lent to ZESCO to finance the Lusaka Transmission and Distribution Rehabilitation Project. Interest is charged at 1.5% semi-annum and the loan (principal plus interest) will be repaid over 30 years including 10 years grace period. The loan is denominated in United States Dollar. The loan balance at the reporting date was US$80.27 million or K1.339 billion.

viii. Development Bank of Southern Africa (DBSA) (KNBEPC)

The borrowing is a term loan facility of US$105.5 million from the Development Bank of Southern Africa Limited. The loan is used to finance the Kariba North Bank Extension Power Corporation project. The loan is repaid in equal instalments semi-annually each year. The facility is in United States Dollar and the amount as at the reporting date was US00.00 million or K00.00 million.

ix. GRZ/China Exim Bank

This is a US$45 million facility obtained from China Exim bank through the Ministry of Finance on 13 October 2014. The loan was obtained to Finance the Kariba North Bank- Kafue west 330KV transmission project. The interest rate is 2%. The facility is in United States Dollar and the balance as at the reporting was US$45.07 million or K751.827 million.

x. GRZ/European Investment Bank - LTDRP Loan Facility

This is a US$106 million loan facility obtained from the European Investment Bank on 3 October 2013 by the Government of the Republic of Zambia and on lent to ZESCO to finance the Lusaka Transmission and Distribution Rehabilitation Project. Interest is charged at 1.2% semi-annum and the loan (principal plus interest) will be repaid over 30 years including 10 years grace period. The loan is denominated in United States Dollar. The loan balance at the reporting date was US$43.059 million or K718.364 million.

xi. GRZ/International Development Association-Kafue Muzuma

This is a US$60 million loan facility obtained from the International Development Association on 6 December 2012 by the Government of the Republic of Zambia and on lent to ZESCO to finance the Kafue Muzuma Transmission Project. Interest shall be computed at 2% per annum and the loan (principal plus interest) will be repaid over 20 years including 5 years grace period. The loan is denominated in United States Dollar. The loan balance at the reporting date was US$41.59 million or K693.879 million.

(continued)

xii. GRZ/European Investment Bank

This is a EUR 50 million loan facility from the European Investment Bank (EIB) obtained by the Government of the Republic of Zambia on 10 December 2012. The facility was obtained for the purpose of financing the Itezhi-Tezhi Hydro Power plant, Mumbwa Substation and Lusaka West - Mumbwa Transmission Line Project. The facility shall be settled over a period of twenty five (25) years including a grace period of five (5) years. The interest is charged at 1.2% per cent per annum. The balance at the reporting date was US$41.35 million or K689.927 million.

xiii. GRZ/African Development Bank

This is a US$40.212 million loan facility obtained from the African Development Bank (ADB) by the Government of the Republic of Zambia on 19 December 2012. The loan was obtained to finance the transmission line for the Itezhi-Tezhi Hydro Power and Transmission Line Project at semi-annual interest of 2.5%. The loan facility is in United States Dollars and the balance at the reporting date was US$36.302 million or K605.644 million.

xiv. GRZ/Agence Francaise De Development

This is a US$34.4 million loan facility obtained from the International Development Association on 18 December, 2012 by the Government of the Republic of Zambia and on lent to ZESCO to finance the construction of Itezhi Tezhi Power Station. Interest is computed at 1.5% semi annum and the loan (principal plus interest) will be repaid over 25 years including 5 years of grace period. The loan is denominated in United States Dollar. The balance at reporting date was US$29.095 million or K485.396 million.

xv. Industrial and Commercial Bank of China – Mpika Transmission

This is a US$29.6 million loan facility obtained from Industrial and Commercial Bank of China by ZESCO Limited on the 13 July 2016. The loan facility was obtained to finance the improvement of power supply in Mpika. The loan shall be repaid over a 15 year period including a grace period of 3 years. The interest is LIBOR plus 3.35% per annum.The loan facility is in United States Dollar and the balance at the reporting date was US$26.556 million or K443.039 million.

xvi. Industrial and Commercial Bank of China Facility Loan - Musonda Falls

This is a US$35.25 million loan facility obtained from Industrial and Commercial Bank of China by ZESCO Limited on the 26 January 2017. The loan facility was obtained to finance the rehabilitation and upgrading of Musonda Falls Hydro Power Plant. The loan shall be repaid over a 15 year period including a grace period of 3 years. The interest is LIBOR plus 3.35% per annum.The loan facility is in United States Dollar and the balance at the reporting date was US$25.338 million or K422.724 million.

xvii. Industrial and Commercial Bank of China - Chipata-Lundazi-Chama 132KV Transmission Line

This is a US$36.84 million loan facility obtained from Industrial and Commercial Bank of China by ZESCO Limited on the 10 August 2017. The loan facility was obtained to finance the Connection of Lundazi and Chama to the National Grid. The loan shall be repaid over a 15 year period including a grace period of 3 years. The interest is LIBOR plus 3.35% per annum.The loan facility is in United States Dollar and the balance at the reporting date was US$24.587 million or K410.198 million.

xviii. Kafue Gorge Lower Bridge Finance

This is a US$22.98 million bridge loan obtained from Kafue Gorge Lower for working capital support and it is an interest free loan. The loan shall be repaid over a period of 5 months. The loan facility is denominated in United States Dollars and the balance as at the reporting date was US$22.98 million or K382.026 million.

xix. GRZ/Japan International Cooperation Agency (JICA)

This is a Yens 5.5 billion loan facility obtained from JICA by Government of Republic of Zambia on 1 November 2010. There were additional drawdowns amounting to Yens 149 million during the year. The loan was lent to ZESCO to finance the Increased Access to Electricity Project. The loan shall be repaid over a 15 year period including a grace period of 5 years. The interest is charged at 0.05% per annum. The loan facility is in Japanese Yen and the balance at the reporting date was Yens 2.073 billion or K300.34 million.

xx. India Exim Bank Loan 2

This is a US$20.35 million facility obtained from India Exim bank on 11 April 2018 to finance the construction of 142 km 132kV transmission line from Leopards Hill to Chitope along with the 33kV distribution network. The interest rate is LIBOR plus 3.0%. The facility is in United States Dollar and the balance as at the reporting date was US$16.806 million or K280.388 million.

xxi. GRZ/European Investment Bank

This is a EUR22 million loan facility obtained from the European Investment Bank (EIB) by the Government of the Republic of Zambia on 4 of December 2012. The Government agreed to on-lend to ZESCO Limited on the terms and conditions set forth in the finance contract. The purpose of the facility was to finance the Kafue-Livingstone transmission Line project. The loan facility shall be repaid to the Government in equal semi-annual installments beginning five (5) years after the signature date of the on-lending loan and ending ten (10) years after the date of such agreement. The interest is charged at one and half percent (1.5%). The loan facility is in USD and the balance at the reporting date was US$14.1 million or K235.196 million.

xxii. China Machinery Engineering Corporation (CMEC)

This is a US$15 million facility (Bridging finance) obtained from China Machinery Engineering Corporation (CMEC) by ZESCO Limited on 31 May 2018. The facility was obtained for the construction of Lusiwasi Upper Hydropower Station. The tenure of the facility is 18 months from the date when the agreement came into effect to the date when the funds are available from the financial institutions. Funds and Interest shall be repaid at once after ZESCO Limited obtains financing or in Twelve equal installments whichever comes earlier. The interest is charged at 6% fixed per annum. The balance at the reporting date was US$12.781 million or K213.232 million.

xxiii. GRZ/Nigeria Trust Fund

This is a US$9.22 million loan facility obtained from the Nigerian Trust Fund by the Government of the Republic of Zambia on 19 December 2012. The loan was lent to ZESCO Limited for the purpose of financing the Itezhi-Tezhi Hydro Power and Transmisssion Line project. The loan shall be repaid over a period of twenty five (25) years including a grace period of five (5) years. The interest is charged at zero point seventy five (0.75%) per annum fixed interest rate. The loan facility is in United States Dollars and the balance at the reporting date was US$8.07 million or K134.636 million.

xxiv. China Exim Bank ii - Kabwe - Pensulo

This is a US$114 million facility obtained from Export-Import Bank of China (Exim Bank China) by ZESCO Limited on 15 December 2017. The facility was obtained for the construction of the second Kabwe Stepdown-Pensulo 330 KV Transmission Line project. The tenure of the facility is 15 years. The principal and interest shall be repaid in 24 successive semi-annual instalments. The interest is charged at 3% margin plus LIBOR per annum. The balance at the reporting date was US$7.6 million or K127.5 million.

xxv. Geria International Investments LLC

This is a US$10 million loan facility obtained from Geria International Investments LLC on 02 April 2019. The loan was obtained to finance the Supply, Delivery and Commissioning of the Leopards Hill switchyard, Mpashya and Chitope 132/33kV substations and construction of staff houses and offices. The loan tenure is 6 years. The interest rate is 9.85% fixed. The facility is in United States Dollar and the balance as at the reporting date was US$6.986 million or K116.547 million.

xxvi. Geria International Investments LLC 2

This is a US$10 million loan facility obtained from Geria International Investments LLC on 30 May 2020. The loan was obtained to finance the Power reinforcement to New Mumbwa Sub-Station, Coventry Sub Station and Kafue Town Sub Station. The loan tenure is 6 years. The interest rate is 9.85% fixed. The facility is in United States Dollar and the balance as at the reporting date was US$7.00 million or K116.782 million.

(continued)

xxvii. GRZ/World Bank

This is a US$16 million loan facility obtained from World Bank by Government of Republic of Zambia on 9 February 2009. The loan was lent to ZESCO to finance the Increased Access to Electricity Project. The loan shall be repaid over a 20 year period including a grace period of 5 years. The loan will have a 2% interest charge per annum. The loan facility is in United States Dollar and the balance at the reporting date was US$4.41 million or K73.619 million.

xxviii. ABSA Lease

This is a K100 million loan facility from ABSA Bank Zambia Plc for purchase of 89 brand new motor vehicles from Toyota Zambia. Finance charges on this facility are at 10.50% plus Bank of Zambia Policy Rate (BPR). This credit agreement was signed on 03 June 2021. Principal and interest are paid monthly and the loan tenure is 3 years. The facility balance at the reporting date was K65.219 million.

xxix. GRZ/Agence Francaise de Development

This is a €40 million loan facility obtained from Agence Francaise de Development by GRZ and on lent to ZESCO Limited on 23 June 2016 to finance the improvement of power supply in Southern Division. The loan shall be repaid over a 20 year period including a grace period of 5 years. The interest rate is 5% per annum fixed. The loan facility is in Euros and the balance at the reporting date was €3.0 million or K56.617 million.

xxx. GRZ/World Bank Facility 2

This is a US$10 million loan facility obtained from World Bank by Government of Republic of Zambia on 21 March 2010. The loan was lent to ZESCO to finance the Increased Access to Electricity Project. The loan shall be repaid over a 20 year period including a grace period of 5 years. The loan will have a 2% interest charge per annum. The loan facility is in United States Dollar and the balance at the reporting date was US$3.24 million or K54.016 million.

xxxi. CNMC Industrial Zone Development

The facility was obtained as capital contribution in 2009 on the Chambishi line from ZCCZ who contributed 40% of the total project costs of US$27.8 million (i.e. US$11.1 million). It is to be paid in 180 equal instalments of US$61,778 per month. There is no interest on this vendor finance and there is no security attached to the agreement. The balance at the reporting date was US$1.4826 million or K24.735 million.

xxxii. Mpande Limestone (Z) Limited

The facility was obtained (Bridging Finance) for the power connection to Mpande Limestone (Z) Limited on 23 March 2018. It is to be paid in 45 months. The interest on this facility is at 4.5%. The balance at the reporting date was US$0.7276 million or K12.138 million.

xxxiii. Standard Chartered Bank

This is a US$122 million loan facility obtained from Standard Chartered Bank in February 2016 to refinance the $40 million bridge facility and other general corporate purposes relating to capital projects but not limited to the upgrading of Musonda falls power station, new Lusiwasi Upper 15 MW plant, construction of Chama Lundazi Transmission Line. Interest is charged at an average of 5.75% plus 6 month Libor, semi-annually. The loan (principal plus interest) will be repaid over 7 years including 2 years grace period. The loan is denominated in United States Dollar. The loan balance was repaid off at the reporting date with K0.000 balance.

xxxiv. ZANACO $20 Million Medium Term Facility

This was a US$ 20 million Short Term Loan obtained from ZANACO by ZESCO Limited on the 29 March 2019. The facility was obtained for the purpose of working capital towards the payment of power purchases from Maamba Collieries. The interest is charged at 10% fixed per annum. The balance at the reporting date was US $0.00 million or K0.00 million.

xxxv. India Exim Bank – Loan 1

This is a US$47.33 million facility obtained from India Exim bank on 9 June 2012. The loan was obtained to finance the connection of Luangwa to the national grid. The loan will be repaid in seven equal installments. The interest rate is LIBOR plus 5.5%. The facility is in United States Dollar and the balance as at the reporting date was US$00.00 million or K00.00 million.

xxxvi. Development Bank of Southern Africa

This is a ZAR210.4 million loan facility obtained from Development Bank of Southern Africa Bank on 22 July 1998. The loan was obtained to finance the Power Rehabilitation Projects. The duration of the loan is 20 years including a grace period of 5 years. This is a related party loan between the Parent Group and it's subsidiary (ZESCO Limited). The loan facility has a fixed interest rate of 15.25% per annum. The balance as at the reporting date was ZAR00.00 million or K00.00 million.

xxxvii. Standard Bank of South Africa

This is a US$29.5 million facility obtained from Standard Bank of South Africa. The loan was obtained to finance the connection of North-Western Province to the National grid. The interest rate is LIBOR plus 5% per annum. The loan is to be repaid over a period of 7 years with a 2 years grace period. The facility is in United States Dollar and the amount as at the reporting date was US00.00 million or K00.00 million.

xxxviii. European Investment Bank 2

This is a EUR7.6 million loan facility obtained from European Investment Bank by ZESCO Limited on 12 July 2005 to finance the Kariba North Bank Power Station Rehabilitation and Uprating Works under Power Rehabilitation Projects. The interest rate is EURIBOR plus 2.954% per annum. The loan facility is in Euro and the balance at the reporting date was EUR00.00 million or K00.00 million.

Breach of loan agreements

(i) European Investment Bank

The Group was non compliant with some covenants because the current ratio was less than 1, the Debt Service Cover ratio was less than 1 and; the debt collection period was more than 45 days.

(ii) Development Bank of Southern Africa

The Group was non-compliant with the DBSA loan covenants. The Group was in breach of the leverage ratio, Debt Service Cover ratio and gearing ratio which was more than 72%.

(iii) Standard Chartered Bank

The Group was non compliant with the Gross Debt to EBITDA which was -54; and the Debt Service Cover Ratio was less than 1.25.

(iv) Stanbic Bank

The Group was non-compliant with the Debt to Equity percentage which was less than 140%. The Group was non-compliant with the Debt Service Cover ratio which was less than 1.25 and the ratio of Gross Debt to EBITDA was more than 6.

(v) Bank of China

The Group was non-compliant as the EBITDA to Total Interest Cost was less than 2 but was compliant to the ratio of Total Liabilities to Total Assets which was less than 70%.

(vi) ZANACO

The Group was compliant with the gearing ratio which was less than 1; and was non compliant with the current ratio which was less than 1.

23. RETIREMENT BENEFIT OBLIGATION

(i) Defined contribution plan - NAPSA

Defined contribution plans are a pension plan under which the Group pays fixed contributions into the National Pension Scheme Authority, which is a defined contribution plan. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods.

The Group's contributions to the defined contribution schemes are charged to profit or loss in the year to which they relate. The Group has no further obligation once contributions have been paid.

The total expense recognised in the profit or loss of K79.4 million (2020: 76.3 million) represents contributions payable to these plans by the Group.

As 31 December 2021, contributions of K14.5 million (2020: K11.4 million) due in respect of the current reporting period had not been paid over to the plans.

(ii) LASF defined benefit plan

Under the terms of employment, qualifying employees of ZESCO Limited are members of a state-managed retirement benefit plan operated by the Local Authorities' Superannuation Fund ("LASF"). ZESCO Limited is required to contribute a specified percentage of payroll costs to the retirement benefit plan to fund the benefits. The only obligation of ZESCO Limited with respect to the retirement benefit plan is to make the specified contributions. The fund also administers the pension schemes of a number of organisations, including all local authorities. The last actuarial valuation of the entire fund for the five years period to 31 December 2017 was carried out and showed a deficit of K538 million. No provision has been made in these financial statements for any unfunded liability of the Fund as the directors are of the opinion that any liability will be met by the Government of the Republic of Zambia.

The Group's contributions to the plan are charged to profit or loss in the year to which they relate. The Group has no further obligation once contributions have been paid. The total cost of pension contributions during the year was K16.3 million (2019: K18.6 million). As at 31 December 2021, contributions of K1.7 million (2020: K2.05 million) due in respect of the current reporting period had not been paid over to the plans.

(iii) Long service retirement benefit

Under the terms of employment, qualifying employees of the Group are entitled to post employment benefits. The benefits are defined benefit in nature based on the members' length of service and their salary at the earlier of retirement or death or termination from employment. The defined benefit plan is administered and paid for by the Group. The Plan runs on an unfunded basis as ZESCO Limited (the Employer) meets benefit costs as they fall due.

The most recent actuarial valuation of the present value of the defined benefit obligation was carried out on 31 December 2021 by African Actuarial Consultants. The present value of the defined benefit obligation, and the related current service cost and past service cost were measured using the projected unit credit method.

The plan typically exposes the Group to actuarial risks such as: interest rate risk, salary risk and liquidity risk.

Interest rate risk	The plan liabilities are calculated using a discount rate which is the long-term investment return which matches the yield on government bonds as reported in the IMF Report. A decrease in government bonds will increase the plan liabilities.
Salary risk	The present value of the defined benefit plan liability is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the plan's liability.
Liquidity risk	The plan is unfunded. There is a risk that resources might not be available when needed to pay the benefits that have become due.

Actuarial assumptions:	**2021**	**2020**
Discounting rates	26%	33.5%
Salary increases	19.5%	27.1%

(continued)

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Benefit cost to be recognized in profit and loss				
Net interest	-	846,807	-	846,807
Current service cost	398,829	224,443	398,829	224,443
Prior year service cost	1,379,304	(838,079)	1,379,304	(838,079)
Profit and loss expense	1,778,133	233,171	1,778,133	233,171
Remeasurements to be recognized in other comprehensive income				
Gain from change in financial assumptions	-	(838,079)	-	19,661
Experience gains	-	(521,564)	-	(521,564)
Actuarial Gains on economic assumptions	-	(19,661)	-	838,079
	-	(1,379,304)	-	1,379,304
The amounts to be recognised in the statement of financial position				
At beginning of the year	2,090,038	2,854,575	2,090,038	2,854,575
Current service cost	398,829	224,443	398,829	224,443
Prior year service cost	1,379,304	(838,079)	1,379,304	(838,079)
Interest income	-	846,807	-	846,807
Gain from change in financial assumptions	3,117	6,112	1,242	6,112
Experience gains	-	(521,564)	-	(521,564)
Benefits paid during the year	(626,574)	(482,256)	(626,574)	(482,256)
At 31 December	3,244,714	2,090,038	3,242,839	2,090,038
Disclosed in the financial statements as:				
Non-current	3,066,379	1,836,787	3,066,379	1,836,787
Current	178,335	253,251	176,460	253,251
	3,244,714	2,090,038	3,242,839	2,090,038

Notes to the Consolidated Financial Statements

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Sensitivity of defined benefit obligation to actuarial assumptions				
Current results	3,244,714	2,090,038	3,242,839	2,090,038
Discount rate				
Increase by 1%	-	175,132	-	175,132
Decrease by 1%	-	(193,004)	-	(193,004)
Salary increase				
Increase by 1%	-	184,893	-	184,893
Decrease by 1%	-	(201,562)	-	(201,562)

The table above shows that assuming a long-term investment return that is 1% higher than the valuation assumption would yield a Defined Benefit Obligation that is K3.03 million lower than that reported. On the other hand, adopting a long-term investment rate that is 1% lower than assumed would yield a defined benefit obligation that is K3.06 million higher than reported.

Applying a long-term salary escalation rate that is 1% higher than assumed would yield a liability position that is K209.30 million higher than reported whereas a salary escalation that is 1% lower than expected would yield a liability value that is K187.31 million lower than reported.

(iv) Gratuity benefits

The Group accrues for short term gratuity benefits for employees on contracts between 1 to 3 years. The gratuity computations are based on the terms and conditions agreed with employees at the point of signing the contract;

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
At the beginning of the year	40,973	15,200	40,973	15,200
Current service cost	1,241	45,980	1,241	45,980
Benefits paid during the year	-	(20 207)	-	(20 207)
At the end of the year	42,214	40,973	42,214	40,973
Disclosed in the financial statements as:				
Non-current	42,214	12,165	42,214	12,165
Current	-	28,808	-	28,808
	42,214	40,973	42,214	40,973
(v) Total retirement benefit obligation recorded on the statement of financial position				
Long service retirement benefit	3,202,500	2,049,065	3,202,500	2,049,065
Gratuity benefits	42,214	40,973	42,214	40,973
	3,244,714	2,090,038	3,244,714	2,090,038
Disclosed in the financial statements as:				
Non-current	3,066,379	1,836,787	3,066,379	1,836,787
Current	178,335	253,251	178,335	253,251
	3,244,714	2,090,038	3,244,714	2,090,038

Notes to the Consolidated Financial Statements

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24. CAPITAL GRANTS AND CAPITAL CONTRIBUTIONS

GROUP	Capital grants	Capital contributions	Total
	K'000	K'000	K'000
At 1 January 2020	346,938	2,480,174	2,827,112
Additions during the year	28 093	211,930	240,023
Amortisation of capital grants and contributions	(26,271)	(160,760)	(187,031)
At 31 December 2020	348,760	2,531,344	2,880,104
Additions during the year	118,467	329,171	447,638
Amortisation of capital grants and contributions	(26,271)	(170,405)	(196,676)
At 31 December 2021	440,956	2,690,110	3,131,066

	2021	2020
	K'000	K'000
Maturity analysis:		
Non current	2,997,100	2,756,877
Current	133,966	123,227
Total	3,131,066	2,880,104

COMPANY	Capital Grants	Capital contributions	Total
	K'000	K'000	K'000
At 1 January 2020	346,938	2,480,174	2,827,112
Additions during the year	28 093	211 930	240 023
Amortisation of capital grants and contributions	(26,271)	(160,760)	(187,031)
At 1 January 2021	348,760	2,531,344	2,880,104
Additions during the year	118,467	329,171	447,638
Amortisation of capital grants and contributions	(26,271)	(170,405)	(196,676)
At 31 December 2021	440,956	2,690,110	3,131,066

	2021	2020
	K'000	K'000
Maturity analysis:		
Non current	2,997,100	2,756,877
Current	133,966	123 227
Total	3,131,066	2,880,104

Notes to the Consolidated Financial Statements

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25. TRADE AND OTHER PAYABLES

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
Trade payables	23,876,085	29,739,336	18,413,384	22,540,651
Sundry payables and accrued expenses	1,611,419	926,969	1,607,421	891,386
Employee related accruals	155,265	262,763	155,265	262,763
	25,642,769	30,929,068	20,176,070	23,694,800

Trade and other payables principally comprise amounts outstanding in respect of trade purchases and ongoing costs, as well as amounts accrued in respect of operating costs.

The average credit period on purchases of certain goods is 30 days.

The Directors consider that the carrying amount of trade and other payables approximates their fair value.

26. BANK OVERDRAFT

	Group		Company	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
ABSA Bank Zambia Plc (i)	-	26,721	-	26,721
Zambia National Commercial Bank Plc (ii)	-	10,484	-	10,484
	-	37,205	-	37,205

i) Absa Bank Zambia Plc
An overdraft banking facility amounting to K50 million. The overdraft was agreed in January 2020 with a 12-month tenor with interest payable monthly at three-month BOZ policy plus 12.0%. The facilities are repayable strictly on demand. The amount drawn as on 31 December 2021 under this facility was Knil million (2020: K26.7 million). The facility is secured against unlimited collections held in the bank accounts from time to time.

ii) Zambia National Commercial Bank Zambia Plc
An overdraft banking facility amounting to K35 million. The overdraft was agreed in January 2020 with a 12-month tenor with interest payable monthly at three-month BOZ policy rate plus 9.0%. The facilities are repayable strictly on demand. The amount drawn as on 31 December 2021 under this facility was Knil (2020: K10.5 million). The facility is secured against unlimited collections held in the bank accounts from time to time.

27. FINANCIAL INSTRUMENTS

Capital risk management
The Group manages its capital to ensure that it will be able to continue as a going concern while managing the return to stakeholders through the management of the debt and equity balance. The Group's overall strategy remains unchanged from prior year.

The capital structure of the Group consists of cash and cash equivalents, interest bearing liabilities and equity attributable to equity holders of the Group, comprising issued capital, reserves and retained earnings. Debt includes both long term and short term interest bearing liabilities.

Gearing ratio
The Group reviews the capital structure on an ongoing basis. As part of this review, the management considers the cost of capital and the risks associated with each class of capital. The Group has a gearing ratio of 256% (2020: 1,434%).

Notes to the Consolidated Financial Statements

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The gearing ratio at the year end was computed as follows:

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Debt (i)	35,093,526	46,681,713	19,828,193	26,255,300
Equity (ii)	13,698,874	3,255,122	14,511,429	5,943,872
Total debt and equity	256%	1,434%	137%	442%

(i) Debt is defined as long and short term borrowings.

(ii) Equity includes all capital and reserves of the Group.

Significant accounting policies

Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognised in respect of each class of financial asset, financial liability and equity instrument are disclosed in the accounting policies to the consolidated financial statements.

The Directors consider that the carrying amounts of financial assets and financial liabilities recognised in the financial statements approximate their fair values.

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
Categories of financial instruments				
Financial assets:				
- Amounts due from related parties	3,876,886	4,977,870	3,908,345	4,984,172
- Trade and other receivables	2,124,590	4,249,152	1,995,373	4,230,628
- Bank and cash	2,985,177	4,379,936	2,321,959	3,109,074
	8,986,653	13,606,958	8,225,677	12,323,874
Financial liabilities:				
- Amounts due to related parties	9,811,043	9,674,319	10,564,868	5,156,304
- Trade and other payables	25,642,769	30,929,068	20,176,070	23,694,800
- Borrowings	35,093,526	46,681,713	19,828,193	26,255,300
- Lease liabilities	37,613	16,452	30,250	16,452
- Bank overdraft	-	37,205	-	37,205
	70,584,951	87,338,757	50,599,381	55,160,061

Financial risk management objectives
The Group's executive directors and management co-ordinates access to domestic markets and borrowings from related parties, monitors and manages the financial risks relating to the operations of the Group. These risks include market risk (including currency risk, fair value interest rate risk and price risk), credit risk, liquidity risk and cash flow interest rate risk.

The Group does not enter into or trade financial instruments, including derivative financial instruments, for speculative purposes.

Market risk
The Group's activities expose it primarily to the financial risks of changes in foreign currency exchange rates and interest rates. The Group does not enter into any derivative financial instruments to manage its exposure to interest rate and foreign currency risk, including forward foreign exchange contracts to hedge the exchange rate risk.

There has been no change to the Group's exposure to market risks or the manner in which it manages and measures the risk.

Foreign currency risk management
The Group undertakes certain transactions denominated in foreign currencies. Hence, exposures to exchange rate fluctuations arise. Exchange rate exposures are managed within approved policy parameters as approved by the Board of Directors.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the end of the reporting period are as follows:

GROUP

	Financial assets		Financial liabilities	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
United States Dollar ($)	7,716,419	24,965,389	20,839,967	86,277,110
Japanese Yen (JPY)	-	-	300,336	386,817
South Africa Rand (ZAR)	-	-	-	67,207
Euro	-	-	121,835	1,458,547
GBP	7,716,416	24,965,389	21,162,138	88,189,681

COMPANY

	Financial assets		Financial liabilities	
	2021	2020	2021	2020
	K'000	K'000	K'000	K'000
United States Dollar ($)	7,716,419	24,965,389	20,839,967	58,656,737
Japanese Yen (JPY)	-	-	300,336	386,817
South Africa Rand (ZAR)	-	-	-	67,207
Euro	-	-	121,835	1,458,549
GBP	7,716,416	24,965,389	21,162,138	60,569,310

Interest rate sensitivity analysis

The interest rate risks sensitivity analysis is based on the assumption that changes in the market interest rates affect the interest income or expenses of variable interest financial instruments:

The tables below sets out the impact on current profit before taxation of an incremental 5% parallel fall or rise in all yield curves during the year:

GROUP		Scenario 1	Scenario 2
		5% increase in variable interest rates	5% decrease in variable interest rates
	K'000	K'000	K'000
At 31 December 2021			
Profit before tax	10,697,723	11,232,609	10,162,837
At 31 December 2020			
Loss before tax	(16,701,596)	(17,536,676)	(15,866,516)

COMPANY		Scenario 1	Scenario 2
		5% increase in variable interest rates	5% decrease in variable interest rates
	K'000	K'000	K'000
At 31 December 2021			
Profit before tax	8,616,350	9,047,168	8,185,533
At 31 December 2020			
Loss before tax	(14,840,586)	(15,582,615)	(14,098,557)

(continued)

Interest rate risk management

The Group, its subsidiaries, associates and joint venture are exposed to interest rate risk arising on shareholders loans and loans from the banks for its working capital requirements.

The exposure to interest rate risk is evaluated regularly by management to align with interest rate views and defined risk appetite, by either positioning the statement of financial position or protecting interest expense through different interest rate cycles.

Interest rate sensitivity analysis

The sensitivity has been determined based on the exposure to interest rates for non-derivative instruments at the end of the reporting period. For floating rate liabilities, the analysis is prepared assuming the amount of the liability outstanding at the end of the reporting period was outstanding for the whole year. A 5% increase or decrease is used when reporting interest rate risk internally to key management personnel and represents management's assessment of the reasonably possible change in interest rates.

The Group, its subsidiaries, associates and joint venture's sensitivity to interest rates has increased during the current period mainly due to the increase in variable rate debt instruments.

Credit risk management

Credit risk management refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group is exposed to credit risk in respect of trade and other receivables. As at the financial period end the Group had trade receivables which were due from the Group's customers.

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
The Group's maximum exposure to credit risk is analysed below:				
Amounts due from related parties	3,876,886	4,977,870	3,908,345	4,984,172
Bank and cash balances	2,985,177	4,379,936	2,321,959	3,109,074
Trade and other receivables	2,124,590	4,249,152	1,995,373	4,230,628
	8,986,653	13,606,958	8,225,677	12,323,874
The maximum exposure to credit risk for trade receivables at the reporting date by key customer sector was:				
Mining	15,067,089	15,094,296	15,067,089	15,094,296
Exports	1,057,274	954,344	1,057,274	954,344
Industrial and related sectors	332,167	425,199	386,680	425,199
The Local authorities and water utilities	386,680	333,041	332,167	333,041
Government and relented entities	364,791	253,407	364,791	253,407
Domestic customers	100,250	91,592	100,250	91,593
Agriculture and related sectors	17,565	16,359	17,565	16,359
IP Connectivity	131,390	-	-	-
	17,457,206	17,168,238	17,325,816	17,168,239

Liquidity risk management

The Group manages liquidity risk by maintaining adequate reserves and banking facilities and by continuously monitoring forecast and actual cash flows and matching the maturity profile of financial assets and liabilities.

The following table below details the Group's remaining contractual maturity for its non-derivate financial assets and liabilities. The table below has been drawn up based on the undiscounted contractual maturities of the financial assets and liabilities.

Notes to the Consolidated Financial Statements

for the year ended 31 December 2021

(continued)

GROUP	Payable on Demand	1-3 Months	3 months to 1 year	Above 1 year	Total
	K'000	K'000	K'000	K'000	K'000
Year ended 31 December 2021 Financial liabilities					
- Borrowings	-	2,157,293	-	32,936,233	35,093,526
- Trade and other payables	-	25,642,769	-	-	25,642,769
- Amounts due to related parties	-	9,811,043	-	-	9,811,043
- Bank overdraft	-	-	-	-	-
- Lease liabilities	-	-	-	-	-
	-	37,611,105	-	32,936,233	70,547,338
Financial assets					
-Amount due from related parties	-	3,876,886	-	-	3,876,886
- Trade and other receivables	-	2,124,590	-	-	2,124,590
- Bank and cash balances	2,985,177	-	-	-	2,985,177
	2,985,177	6,001,476	-	-	8,986,653

COMPANY	Payable on Demand	1-3 Months	3 months to 1 year	Above 1 year	Total
	K'000	K'000	K'000	K'000	K'000
Year ended 31 December 2021 Financial liabilities					
- Borrowings	-	-	2,157,293	17,670,900	19,828,193
- Trade and other payables	1,511,744	618,859	254,505	17,790,962	20,176,070
- Amounts due to related parties	910,377	224,639	228,801	9,201,051	10,564,868
- Lease liabilities	-	-	15,711	14,539	30,250
	2,422,121	843,948	2,656,310	44,677,452	50,599,381
Financial assets					
- Amounts due from related parties	-	-	3,908,345	-	3,908,345
- Trade and other receivables	903,813	381,122	409,353	301,085	1,995,373
- Bank and cash balance	2,321,959	-	-	-	2,321,959
	3,225,772	381,122	4,317,698	301,085	8,225,677

(continued)

	Payable on Demand	1-3 Months	3 months to 1 year	Above 1 year	Total
	K'000	K'000	K'000	K'000	K'000
Year ended 31 December 2020 **Financial liabilities**					
- Trade and other payables	-	30,929,068	-	-	30,929,068
- Bank overdraft	37,205	-	-	-	37,205
- Borrowings	-	3,974,751	-	42,706,962	46,681,713
-Lease liabilities	-	-	16,452	-	16,452
- Amounts due to related parties	-	9,674,319	-	-	9,674,319
	37,205	44,578,138	16,452	42,706,962	87,338,757
Financial assets					
- Amounts due from related parties	-	4,977,870	-	-	4,977,870
- Trade and other receivables	-	4,249,152	-	-	4,249,152
- Bank and cash balances	4,379,936	-	-	-	4,379,936
	4,379,936	9,227,022	-	-	13,606,958

FAIR VALUE MEASUREMENTS
The information set out below provides information about how the Group determines fair values of various financial assets and financial liabilities.

The following table provides an analysis of financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities. This level includes listed equity securities and debt instruments on exchanges (for example, Lusaka Stock Exchange).
- Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3 – inputs for the asset or liability that are not based on observable market data (unobservable inputs). This level includes equity investments and debt instruments with significant unobservable components.
- This hierarchy requires the use of observable market data when available. The Group considers relevant and observable market prices in its valuations where possible.
- Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis.
- There were no financial assets and liabilities that are measured at fair value on a recurring basis during the period.
- Fair value of financial assets and financial liabilities that are not measured at fair value on a recurring basis (but fair value disclosures are required).
- Except as detailed in the following table, the directors consider that the carrying amounts of financial assets and financial liabilities recognised in the financial statements approximate their fair values

(continued)

GROUP

	2021		2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
- Amounts due from related parties	3,876,886	3,876,886	4,977,870	4,977,870
- Trade and other receivables	2,124,590	2,124,590	4,249,152	4,249,152
- Bank and cash	2,985,177	2,985,177	4,379,936	4,379,936
Total	8,986,653	8,986,653	13,606,958	13,606,958
Financial liabilities				
- Borrowings	35,093,526	35,093,526	46,681,713	46,681,713
- Trade and other payables	25,642,769	25,642,769	30,929,068	30,929,068
- Amounts due to related parties	9,811,043	9,811,043	9,674,319	9,674,319
- Bank overdraft	-	-	37,205	37,205
- Lease liabilities	37,613	37,613	16,452	16,452
Total	70,584,951	70,584,951	87,338,757	87,338,757

COMPANY

	2021		2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
- Amounts due from related parties	3,908,345	3,908,345	4,984,172	4,984,172
- Trade and other receivables	1,995,373	1,995,373	4,230,628	4,230,628
- Cash and bank balances	2,321,959	2,321,959	3,109,074	3,109,074
Total	8,225,677	8,225,677	12,323,874	12,323,874
Financial liabilities				
- Borrowings	19,828,193	19,828,193	26,255,300	26,255,300
- Trade and other payables	20,176,070	20,176,070	23,694,800	23,694,800
- Amounts due to related parties	10,564,868	10,564,868	10,357,585	10,357,585
- Bank overdraft	-	-	37,205	37,205
- Lease liabilities	30,250	30250	16,452	16,452
Total	50,599,381	50,599,381	60,361,342	60,361,342

Notes to the Consolidated Financial Statements

for the year ended 31 December 2021

(continued)

GROUP

	Level 1	Level 2	Level 3	Total
	K'000	K'000	K'000	K'000
Fair value hierarchy as at 31 December 2021				
Financial assets				
- Amounts due from related parties	-	-	3,876,886	3,876,886
-Trade and other receivables	-	-	2,124,590	2,124,590
- Bank and cash balances	-	-	2,985,177	2,985,177
Total	-	-	8,986,652	8,986,652
Financial liabilities:				
- Borrowings	-	-	35,093,526	35,093,526
- Trade and other payables	-	-	25,642,769	25,642,769
- Amounts due to related parties	-	-	9,811,043	9,811,043
- Bank overdraft	-	-	-	-
- Lease liabilities	-	-	37,613	37,613
Total	-	-	70,584,951	70,584,951

COMPANY

	Level 1	Level 2	Level 3	Total
	K'000	K'000	K'000	K'000
Fair value hierarchy as at 31 December 2021				
Financial assets				
Loans and receivables:				
- Loans due from a related party	-	-		
- Amounts due from related parties	-	-	3,908,345	3,908,345
-Trade and other receivables	-	-	1,995,373	1,995,373
-Cash and bank balances	-	-	2,321,959	2,321,959
Total	-	-	8,225,677	8,225,677
Financial liabilities:				
- Borrowings	-	-	19,828,193	19,828,193
- Trade and other payables	-	-	20,176,070	20,176,070
- Amounts due to related parties	-	-	10,564,868	10,564,868
- Bank overdraft	-	-	-	-
- Lease liabilities	-	-	30,250	30,250
Total	-	-	50,599,381	50,599,381

Notes to the Consolidated Financial Statements

for the year ended 31 December 2021

(continued)

GROUP

	Level 1	Level 2	Level 3	Total
	K'000	K'000	K'000	K'000
Fair value hierarchy as at 31 December 2020				
Financial assets				
- Amounts due from related parties	-	-	4,977,870	4,977,870
-Trade and other receivables	-	-	4,249,152	4,249,152
- Bank and cash	-	-	4,379,936	4,379,936
Total	-	-	13,606,958	13,606,958
Financial liabilities:				
- Borrowings	-	-	46,681,713	46,681,713
- Trade and other payables	-	-	30,929,068	30,929,068
- Amounts due to related parties	-	-	9,674,319	9,674,319
- Bank overdraft	-	-	37,205	37,205
- Lease liabilities	-	-	16,452	16,452
	-	-	87,338,757	87,338,757

COMPANY

	Level 1	Level 2	Level 3	Total
	K'000	K'000	K'000	K'000
Fair value hierarchy as at 31 December 2020				
Financial assets				
- Amounts due from related parties	-	-	4,984,172	4,984,172
- Trade and other receivables	-	-	3,688,846	3,688,846
Total	-	-	8,673,018	8,673,018
Financial liabilities:				
- Borrowings	-	-	26,255,300	26,255,300
- Trade and other payables	-	-	23,649,800	23,649,800
- Amounts due to related parties	-	-	10,357,583	10,357,583
- Bank overdraft	-	-	37,205	37,205
- Lease liabilities	-	-	16,452	16,452
Total	-	-	60,316,340	60,316,340

The fair values of the financial assets and financial liabilities included in the level 3 category above have been determined in accordance with generally accepted pricing models based on a discounted cash flow analysis, with the most significant inputs being the discount rate that reflects the credit risk of counterparties.

(continued)

28. LEASE LIABILITIES

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	**K'000**
At beginning of the year	16,453	24,737	16,453	24,737
At initial recognition	-	-	-	-
Addition	26,773	2,673	19,410	2,673
Finance costs	3,540	5,193	3,540	5,193
Termination on Lease	-	(4,073)	-	(4,073)
Repayments	(9,153)	(12,078)	(9,153)	(12,078)
At year end	37,613	16,452	30,250	16,452
Maturity analysis				
Year 1	32,775	14,033	25,802	14,033
Year 2	11,994	6,300	11,584	6,300
Year 3	2,357	1,282	2,357	1,282
Year 4	849	462	849	462
Year 5	60	33	60	33
	48,015	22,110	40,652	22,110
Less: Unearned interest	(10,402)	(5,658)	(10,402)	(5,658)
	37,613	16,452	30,250	16,452
Analysed as:				
Non-current	14,929	10,017	14,539	10,017
Current	22,684	6,435	15,711	6,435
	37,613	16,452	30,250	16,452

29. GOING CONCERN

Introduction

The IFRS Conceptual Framework states that going concern is an underlying assumption in the preparation of IFRS financial statements of the Group. Therefore, the financial statements presume that an entity will continue in operation in the foreseeable future or, if that presumption is not valid, disclosure and a different basis of reporting are required.

The Board of Directors ("Board") believes that, as of the date of this report, this presumption is still appropriate and accordingly the financial statements have been prepared on the going concern basis.

Ability of the Group to continue as a going concern

IAS 1 Preparation of Financial Statements requires management to perform an assessment of the Group's ability to continue as a going concern. If management is aware of material uncertainties related to events or conditions that may cast significant doubt upon the entities' ability to continue as a going concern, IAS 1 requires these uncertainties to be disclosed.

In conducting this assessment, the Board have taken into consideration the following factors;

a) Financial position

- The Group's current liabilities as at 31 December 2021 of K38.9 billion (2020: K46.7 billion) exceeds the current assets of K29.0 billion (2020: K32.3 billion). However, the carrying amounts of total assets of the entity of K92.0 billion (2020: K97.2 billion) exceeded the total liabilities of K78.4 billion (K94.0 billion) in the year under review.
- The reduction in current liabilities by 17% to K38.9 billion from K46.7 billion in 2020 was mainly due to appreciation of the Kwacha against the US dollar, as over 85% of liabilities in terms of trade payables owed to Independent Power Producers are invoiced is US dollar, while our reporting currency is the local currency Kwacha, which appreciated by the end of 2021

b) Strategic Plan (10 Year Rolling)

The Directors' have put in place a Strategic Plan (10 - year rolling) with focus on financial sustainability and improved customer service delivery. The initiatives that the Directors are implementing include;

i. Debt Restructuring

The long term debt stands at about K35.1 billion or US$2.1 billion, borrowed for capital infrastructure investment.

As part of the debt restructuring the Group has reached an advanced stage in engagement with The Government of Zambia through the Ministry of Finance and National Planning to convert the Government guaranteed and on-lent concessional loans to equity amounting to US$371.5 million. Once the loans have been converted, it is expected to reduce the levels of gearing and improve the equity.

Further, the Group is in the process of re-negotiating the terms of the existing expensive long term debt under the commercial loans category. The process of engagement with various lenders is still on going. The strategy includes engagement of individual lenders with a view to restructure the existing debt by reviewing the repayment terms and interest rates and possible deferment of the repayment of loans as they fall due.

The debt restructuring will include re-negotiating with some Lenders to reduce the levels of debt reserves, which holds cash cover for the debt repayment for certain loans. This will free up cash to assist in liquidating long outstanding arrears for IPPs and other Suppliers of goods and services.

ii. IPPs Tariff Re-negotiations

The IPPs tariff re-negotiations have been concluded with Maamba Collieries Limited and Itezhi Tezhi Power Corporation Limited. The new tariff has been implemented for Maamba Collieries Limited while the tariff for ITPC is yet to be implemented pending the finalisation of agreement on Conditional Precedences. This will improve the liquidity and reduce the cost of power from IPPs and subsequently improve financial performance.

iii. Revenue Enhancement

This includes the following initiatives;

Migration to cost reflective tariffs for Domestic customers through tariff application to Energy Regulation Board. The tariff application for domestic tariff adjustment has been submitted to the Regulator and a decision is expected during the first quarter of 2023.

Further, the capital contribution for new customer connection is expected to be implemented on 1 January 2023. This will significantly reduce the cost of subsidies on part of ZESCO currently financing the cost of new connection for customers.

The Group has finalised the New Bulky Supply Agreement (BSA) with Copperbelt Energy Corporation Limited. This is expected to provide stability in the relationship with our major customer and provide guaranteed revenue for future working capital. Further, there will be significant reduction in provisions for doubtful debt in line with IFRS 9 - Financial Instruments.

The Group is in the process of resolving the disputed mining receivables with it's major clients arising from the disputed US$6.84 cents/KWh, Letter of Intent and Post BSA. This will result in improved debtor days and Expected Credit Loss Rate for provisioning purposes under IFRS 9 - Financial Instruments.

The Group has continued to engage the Government of Zambia on debt swap for outstanding amounts on it's electricity domestic debt. This is aimed at improving the liquidity of the Group and reduce the outstanding electricity debtor to Government and it's agencies.

c) Macro- Economic conditions and impact of COVID-19

There has been changes in the Macro-Economic conditions in 2021 year with the following major changes.

- The Exchange rate of Kwacha to US$ dollar appreciated to K16.683/ US dollar, this had a positive impact on the financial statements for the Group. The exchange rate movement of Kwacha against the US dollar is sensitive and has an impact in the outcome of the financial performance of the Group in the next 12 months and thereafter.
- The Country has obtained a credit facility of US$1.3 billion from International Monetary Fund (IMF). This will be used as an economic stimulus and to restructure the existing Debt of the Country.
- The Government of the Republic of Zambia is in the process of concluding the country's debt restructuring with it's lender of Euro-Bond and other Creditors which will have a positive impact on the Group's debt structure.

d) Impact of COVID-19

- The Group's operations were defined as essential services, and therefore it was able to operate with fewer disruptions caused by COVID-19 and the associated lockdown restrictions. The Group was however, adversely impacted by loss of lives of it's highly valuable staff and of man hours due to sickness. Further, there was disruption in it's supply chain as most of the critical materials are sourced from outside the country, thereby affecting the timely completion of it's strategic projects and provision quality service delivery to it's customers.
- To mitigate the spread of Covid-19 in work places the Group introduced working from home schedules in order to reduce the crowding in Offices and physical contact of employees. Further, virtual meetings were recommended and wearing of masks and hand sanitizing were made mandatory. Due to the nature of the business

the Group's turnover was not adversely impacted, as the volume sales increased in the period under review.

- The Group meets it's day to day working capital requirements from operations as well as various forms of borrowing.

- The Financial statements have been prepared on the going concern basis which assumes that the Group will continue in operational existence for the foreseeable future. The validity of this depends on the Group being able to obtain external financial resources or GRZ support to finance it's operations.
- If the Group were unable to continue in operational existence for the foreseeable future, adjustments would have to be made to reduce the statement of financial position values of assets to their recoverable amounts, to provide for further liabilities that might arise and to reclassify property, plant and equipment and long-term liabilities as current assets and liabilities.
- Whilst the directors are presently uncertain as to the outcome of the matters mentioned above, they believe that it is appropriate for the financial statements to be prepared on a going concern basis.

30. BUDGETED COMMITMENTS

	Group		Company	
	2021	**2020**	**2021**	**2020**
	K'000	**K'000**	**K'000**	
Authorised by the directors but not contracted for	5,434,082	9,573,117	5,207,279	9,563,073

31. CONTINGENT LIABILITIES

There were no known material contingent liabilities at 31 December 2021 and 31 December 2020.

32. EVENTS AFTER THE REPORTING DATE

(a) The Group commissioned two additional generator machines of 150 MW each at Kafue Gorge Lower Power Station bringing on board 300 MW to the National Grid. This makes four generator machines with a total of 600 MW being operated in 2022 at KGLP. The 5th Generator is undergoing pre-commissioning testing and is expected to be commissioned in 2023.

(b) During the year 2022 the Group signed a 13 year Bulk Supply Agreement (BSA) with Copperbelt Energy Corporation Limited.

(c) The Group finalised a Debt Swap between Water Utilities, Central Government, Zambia Revenue Authority and ZESCO amounting to K329 million.

(d) The Group finalised tariff renegotiations with Independent Power Producers - Maamba Collieries and Itezhi Tezhi Power Corporation Limited (ITPC).

Notes