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South African National Energy Development Institute.

ANNUAL REPORT

2021 | 2022

Contents

PART A: GENERAL INFORMATION

1. General Information

Registered Name:	South African National Energy Development Institute
Physical Address:	CEF House, Block C, Upper Grayston Office Park, 152 Ann Crescent, Strathavon, Sandton
Postal Address:	PO Box 9935, Sandton, 2146
Telephone Number:	011 038 4300
E-mail Address:	information@sanedi.org.za
Website Address:	www.sanedi.org.za
External Auditors:	The Auditor-General of South Africa
Bankers:	ABSA
Company / Board Secretary:	Ms Bernadetta Tabane

2. List of Abbreviations/Acronyms

AA	Accounting Authority
ADA	Australian Development Agency
AEE	Association of Energy Engineers
AFBH	Air Force Base Hoedspruit
AFS	Annual Financial Statements
AGSA	Auditor-General of South Africa
AMI	Advanced Metering Infrastructure
APP	Annual Performance Plan
AR	Annual Report
ARC	Audit & Risk Committee
ASB	Accounting Standards Board
AU	African Union
AUSAID	Australian Agency for International Development
BAC	Bid Adjudication Committee
BARC	Board Audit Risk Committee
BEC	Bid Evaluation Committee
B-BBEE	Broad-Based Black Economic Empowerment
BMS	Battery Management System
CAN	Controller Area Network
CCS	Carbon Capture and Storage
CCU	Carbon Capture & Utilisation
CCUS	Carbon Capture, Utilisation and Storage
CEF	CEF Group of Companies formerly known as the Central Energy Fund
CEO	Chief Executive Officer
CFF	Cleaner Fossil Fuel
CFO	Chief Financial Officer
CGS	Council for Geosciences
CLASP	Collaborative Labelling and Appliance Standards Program
CO2	Carbon Dioxide
CoT	City of Tshwane
CPT	Cape Town
CM	Cleaner Mobility
CSIR	Council for Scientific and Industrial Research
DBE	Department of Basic Education
DBSA	Development Bank of Southern Africa
DE	Germany
DG	Director-General
DKM	Data and Knowledge Management
DMRE	Department of Mineral Resources and Energy (previously DoE)
DoD	Department of Defence
DoL	Department of Labour
DoT	Department of Transport
DoE	Department of Energy (now DMRE)
DSI	Department of Science and Innovation (previously DST)
DSO	Distribution System Operator
DST	Department of Science and Technology
DTIC	Department of Trade, Industry and Competition
EA	Executive Authority
EEDSM	Energy Efficiency Demand Side Management
EDTEA	Energy and Water Sector Education and Training Authority
EE	Energy Efficiency
EEP	Employment Equity Plan
EM	Electric Mobility
EPCs	Energy Performance Certificates
ESCo	Energy Service Company
EU	European Union
EU-GBS4	European Union General Budget Support 4
EV	Electric Vehicles
EWSETA	Energy and Water Sector Education and Training Authority
EXCO	Executive Committee
FR	France
GCIS	Government Communications & Information Systems
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIZ	German Agency for International Cooperation
GRAP	Generally Recognised Accounting Practice
GRI	Global Reporting Initiatives
HR	Human Resources
HRI	Human Resources Information
HySA	Hydrogen South Africa
ICEO	Interim Chief Executive Officer
ICT	Information Communications Technologies
IEA	The International Energy Agency

IEE	Industrial Energy Efficiency
IESBA	the International Ethics Standards Board for Accountants
IIA	Institute of Internal Auditors
IIRC	International Integrated Reporting Council
ISAs	International Standards on Auditing
IT	Information Technology
JUT	Just Energy Transition
KZN	Kwazulu-Natal
LEAP	Low Emissions Analysis Platform
LPG	Liquid Petroleum Gas
MEPS	Minimum Energy Efficiency Performance Standards
MoA	Memorandum of Agreement
MSO	Motor Systems Optimisation
MSW	Municipal Solid Waste
MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
NEA	National Energy Act,2008 (Act No. 34 of 2008)
NECSA	South African Nuclear Energy Corporation
NEHAWU	National Education, Health and Allied Workers Union
NEES	National Energy Efficiency Strategy
NEPBR	National Energy Performance Building Register
NGO	Non-Governmental Organisation
NQF	National Qualifications Framework
NRF	National Research Foundation
NT	National Treasury
OHSA	Occupational Health & Safety Act
PAA	Public Audit Act 25 of 2004
PCSP	Pilot CO2 Storage Project
PCSP	Pilot Carbon Dioxide Project
PFMA	Public Finance Management Act
PFT	Project Facilitation Team
PIU	Project Implementation Unit
PlasWen	Plasma Gasification Waste Treatment
PMC	Project Management Committee
PMO	Project Management Office
PPC	Parliamentary Portfolio Committee
PSO	Pumps Systems Optimisation
PV	Photovoltaics
R&D	Research and Development
RE	Renewable Energy
S&L	Standards and Labelling
SADC	Southern African Development Community
SAEEC	Southern African Energy Efficiency Confederation
SA IEEP II	South African Industrial Energy Efficiency Project
SANDF	South African National Defense Force
SANEA	South African National Energy Association
SANEDI	South African National Energy Development Institute
SANS	South African National Standards
SARS	South African Revenue Service
SCM	Supply Chain Management
SEEL	Energy Efficiency Lighting
SEP	Stakeholder Engagement Plan
SETA	Sector Education and Training Authorities
SG	Smart Grids
SMME / SME	Small, Medium and Micro Enterprises
SOLTRAIN	Southern African Solar Thermal Training and Demonstration Initiative
SOE	State- Owned Entity
SP	Strategic Plan
SU	Stellenbosch University
TIPSASA	Thermal Insulation Products & Systems Association SA
ToR	Terms of Reference
TVET	Technical and Vocational Education and Training
UCT	University of Cape Town
UK	United Kingdom
UKED	UMkhanyakude Education District
UK-PACT	UK Partnering for Accelerated Climate Transitions
UNIDO	United Nations Industrial Development Organisation
UP	University of Pretoria
US	United States
WB	World Bank
WfE	Working for Energy Programme
WSP	Workplace Skills Plan
WWTPs	Waste Water Treatment Plants

Mr Sicelo Xulu
Chairperson of the Board: SANEDI

3. Foreword by the Chairperson

The Board was appointed during the month of January 2022 and immediately got to work in ensuring that the Annual Performance Plan (APP) for the financial year 2022/23 was submitted to the Minister and eventually tabled in Parliament. The Board is satisfied that the strategy of the organisation as approved by the previous Board, remains relevant within the current context. The Board will monitor developments within the sector and the country at large, and impact thereof on the approved strategy and respond to those developments accordingly.

The performance of the organisation for the year under review, continues to demonstrate our commitment to making an impact on the energy landscape of the country. Our focus is to continue to ensure a thriving energy sector that can meet the energy demands of the country, in a sustainable and resource efficient manner.

Although research funding continues to be a challenge, SANEDI showed resilience in navigating this challenge, managing to achieve an impressive 97% of all its planned targets for the year. A trend the Board hopes to maintain and even exceed for years to come. The Board is also pleased that the organisation has yet again managed to attain a Clean Audit outcome from the Auditor-General of South Africa (AGSA), a testimony to sound Governance processes and strong control environment prevalent within the organisation.

SANEDI's work has also attracted recognition of peers in the industry, through a number of accolades. SANEDI's contribution was recognised by the International Association of Energy Engineers (AEE) with a Sub-Saharan Africa Region Institutional Energy Management Award for 2021; Mr Barry Bredenkamp General Manager of Energy Efficiency , was awarded the Energy Engineer of the year award for Sub-Sahara Africa also by the AEE, the interim CEO, Ms Lethabo Manamela, also being awarded the South African National Energy Association (SANEA)'s premium 'Shape-shifter Award for 2021 for SANEDI's contribution to the sector under unprecedented circumstances. The Board congratulates SANEDIs Management for these achievements.

SANEDI continues to enjoy the support of its Shareholder, the Department of Mineral Resources and Energy (DMRE) and other key Departments, which are Department of Science and Innovation (DSI), Department of Trade, Industry & Competition (DTIC), and Department of Transport (DoT) who continue to serve on our Board, as well as partnering with SANEDI on various strategic interventions. The partnership with the DSI, through the Energy Secretariat, has ensured that continued support is provided to the Flagship research programmes such as the Hydrogen South Africa (HySA) programme and the Coal $C0_2X$ programme that will propel the country's innovation efforts forward.

Strategic International partnerships that we have been able to access with the support of the Shareholder, have been instrumental in us securing international support for the implementation of various programmes, and these partnerships will continue to be vital to ensure that SA remains Internationally competitive, and keeps abreast with the latest developments and secure funding for key initiatives.

As the Board, our priority is to ensure the organisation continues to be relevant and responsive to the challenges faced by the energy sector, as well as to ensuring that the sector remain the bedrock of economic growth and development.

In the medium to long term, it is imperative that the organisation focuses on the main challenges that the country is facing and is at the forefront of developing solutions to address these challenges. The Just Energy Transition (JET) remains top of the agenda as the country positions itself to respond to the climate emergency that the world faces. We still have a lot of work to do to ensure that we support the nation's energy transition in a cost-effective manner that will not result in regret for the country and society, and that the country's natural resources and wealth are distributed equally across the country.

Improving the service delivery environment at Municipality level is also paramount in ensuring that we retain and attract investment into our cities for continued growth and development and ensuring that we maintain and improve the quality of life of our people. In this regard, SANEDI will continue to work with our Municipalities and other decision-making structures in areas such electricity infrastructure modernisation and energy efficiency, to ensure that we collectively work together to tackle the challenges that are facing the service delivery environment at municipality level.

In partnership with the DMRE, we have agreed to focus our efforts on data and knowledge for energy planning to support Policy Development, Implementation of the Hydrogen Society Roadmap as well as Energy Efficiency (EE) interventions that will allow us to build upon the achievements of our National Energy Efficiency Strategy (NEES).

The Board would like to extend its appreciation to the Management of SANEDI, and the entire staff under the leadership of the Interim CEO, for ensuring that the organisation continues to excel and achieve its targets for the year, as well as ensuring that SANEDI achieves its third Clean Audit outcome from the AGSA. This demonstrates the high-performance culture that exists within the organisation and its commitment to excellence. The Board also wishes to extend its appreciation to the DMRE for its continued support, and to all SANEDI stakeholders and partners who continue to support us in the implementation of our strategic objectives

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Mr Sicelo Xulu
Chairperson of the Board: SANEDI
Date: 25 August 2022

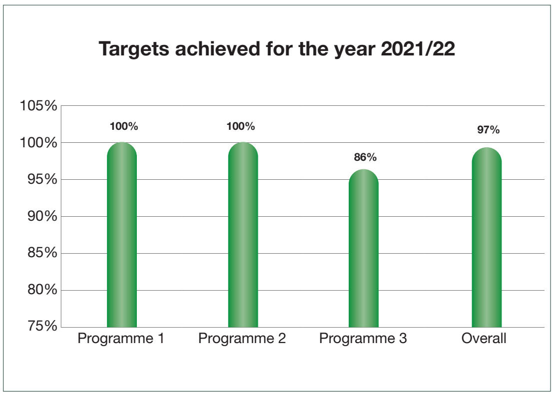
Ms Lethabo Manamela CA(SA)
Interim CEO

4. Interim Chief Executive Officer's Overview

SANEDI would like to welcome the newly appointed Board by the Minister of DMRE in the last quarter of the financial year. The board has moved swiftly to acquaint itself with the organization and exercised their oversight responsibilities and ensured that appropriate governance structures are in place. We look forward to a fruitful partnership between management and the Board as we move SANEDI to even greater heights.

The financial year ended 2021/22 was a year characterised by several successes for the organisation, including amongst others, recognition from industry, for our contribution to the energy sector at both locally and internationally as well as the clean audit outcome from the AGSA. Our organisation takes great pride in this honour, and we strive to go beyond our current levels of performance.

Performance for the year



It was with some of these challenges in mind, that our Annual Performance Plan (APP) for the 2021/22 period was designed to prioritise issues that would unlock opportunities to support the post Covid-19 economic recovery. We are, therefore, excited that we have been able to achieve, once more, 97% of the organisation's targets for 2021/2022. This performance, coupled with historical performance in the past three years is edging us closer to achieving our five strategic outcomes. For the year under review, SANEDI managed to:

- Demonstrate 7 technologies in 3 provinces that have proven to have the potential to support and strengthen our transition to a greener economy and help us expand our energy mix.
- Implement EE retrofits and the installation of small-scale Renewable Energy (RE) intervention to reduce energy footprint and Demand Side Management (DSM) consumption on the National grid. There are plenty of Wastewater Treatment Plants (WWTPs) across the country which can be energy efficient retrofitted. In the frame of the EU GBS (General budget support) SANEDI coordinates the retrofitting on 14 WWTP across the country.
- Together with the National Treasury (NT), we are currently in the process of implementing Smart Grids (SG) projects within Municipalities on a National scale. These projects aim to improve the efficiencies of electricity systems and ultimately contribute to the sustainability of municipalities and improved service delivery.

- Partner with several institutions of higher learning, including Technical Vocational Education Training (TVET) colleges, and seven Universities for research and capacity building initiatives, to ensure that South Africa continues to build the much-needed skills for energy transition.
- Organise and coordinate capacity building and training initiatives that resulted in 161 youth being capacitated, 92 of the beneficiaries being women, and 1 Person with a Disability (PwD). These initiatives also capacitated 100 Government officials, 28 fieldworkers and 46 unemployed Electrical Engineering graduates, two of whom being from previously disadvantaged institutions and TVET colleges.
- Collaborate with the DMRE, Department of Employment and Labour (DoEL) and the Department of Public Works and Infrastructure (DPWI) on specific initiatives to support the National Energy Efficiency Strategy (post 2015 – NEES) and the Regulation on the Mandatory Display, and Submission of Energy Performance Certificates (EPC). These specific initiatives include: Energy Efficiency interventions in 18 Government buildings and 3 wastewater treatment plants, a guideline on Energy Performance for buildings to support the uptake of the submission of building energy data.
- Develop a user guideline on the Mandatory Minimum Energy Performance Standards (MEPS) and Compulsory Energy Efficiency Labelling. Furthermore, a cluster of regulatory impact assessments were undertaken to inform the development of MEPS for various appliances in the country, in response to the National Energy Efficiency Demand Side Management Programme.
- Enter into two collaboration arrangements with Donor Agencies namely, German Agency for International Cooperation (GIZ), and the Australian Agency for International Development (AUSAID), resulting in three projects of National Interest being executed which are; Southern African Solar Thermal Training & Demonstration Initiative (SOLTRAIN), Solutions for Energy Efficient Logistics (SEEL) and Cool Roof.
- Continue to support the DMRE in participating and representing South Africa at International Dialogues and Forums.

New focus Areas

With SANEDI being appointed by the DSI to host the Energy Secretariat, SANEDI continues to provide the necessary support to the DSI in implementing its four flagship programmes. As the Hydrogen economy continues to grip the world and take root here in South Africa, SANEDI is expected to play a significant role in supporting both the DSI, and the DMRE, with the implementation of the DSI Hydrogen Society Roadmap.

Capacity constraints and challenges facing the public entity

Although SANEDI operates with a highly constrained staff complement, SANEDI was still able to achieve improved performance as compared to that of the previous year. However, this scenario is not sustainable, and much effort is taken to improve on the current skills base. With the growing of SANEDI's portfolio, and the addition of complex and strategic projects, sourcing of relevant skills becomes a priority.

Discontinued key activities

The previous Board dissolved the Working for Energy (WfE) programme in 2019/20 FY, most of the outputs from these activities are expected to be finalised in Quarter 1 of the 2022/23 financial year. SANEDI also discontinued its activities on the Carbon Capture and Storage (CCS) programme, which was transferred over to the Council for GeoSciences (CGS) in 2020, however SANEDI still has some pending approval transfers of international organisations of affiliation and memberships.

Requests for rollover of funds

SANEDI applied, and was able to retain R149,126m in surplus funds which have been allocated to projects to be implemented in the 2022/2023 financial year and beyond. The process of committing funds to projects was underway on 31 March 2022. Due to the NT suspension of procurement activities, some of the commitments were delayed. These commitments will be finalised once the procurement revision of regulations is implemented.

Supply Chain Management

SANEDI operates an effective, open, competitive and transparent system of procurement of goods and services. Although we have reported irregular expenditure during the year, it is important to note that these relate to transactions from the previous year. No other transactions of irregular expenditure were reported during the year.

General financial review of the public entity

SANEDI has a good financial position overall. The total funding secured from the fiscus during the year amounted to R87,573m. Although SANEDI ended the year with a surplus of funds, all the funds were committed for projects. As of 31 March 2022, SANEDI had a total of six projects that remain unfunded and continues to look for possible funding options to fund these initiatives.

Spending trends of the public entity

We continue to spend within our allocated budgets and have not exceeded our allocation for the year. We have under spent on the payroll budget for the year, mainly due to some positions which were earmarked for projects that experienced some delays in external approvals and did not materialise during the year. We also had some key vacancies that we struggled to fill, due to salary expectations that in some instances were above our current salary scales. The Board is embarking on reviewing the competitiveness of our remuneration packages relative to the market, with the objective of ensuring that SANEDI attract, motivate and retain the right skills in the organisation.

Outlook/ Plans to address financial challenges

Funding for research remains a challenge, especially with the current fiscal constraints and competing priorities faced by the National Government. It is important that as we look forward to implementing the strategy of the organisation, we consider other sources of funding that are external to the National Government, particularly the potential of leveraging climate change funds made available to support countries in order to combat the effects of climate change through mitigation and adaptation actions. The support of donor agencies with whom National Government has entered into Bi-lateral and multilateral agreements with, remains crucial to the organisation, as they are able to provide collaborative technical and financial support to supplement our limited resources.

Economic Viability

SANEDI will continue to exist as a going concern in the foreseeable future. National Government has allocated funding to fund SANEDI's activities for the entire Medium Term Strategic Framework (MTSF) period. The entity also continues to support the Implementation of several strategic and flagship programmes of the National Government. Several new projects which are funded by private donor funds have also been secured for the MTSF period.

Audit Report matters in the previous year and how it would be addressed

Our implementation plan of AGSA recommendations currently sits at 90% resolved at the end of the financial year. Management is currently in the process of resolving the matters around the irregular expenditure brought forward from the prior financial years. Once all irregular expenditure has been processed in terms of the Irregular Expenditure framework, all the AGSA 2020/21 findings will be rendered closed. There were no other material findings raised by the AGSA during the review of the 2021/22 financial period and this resulted in SANEDI receiving a Clean Audit outcome.

Events after the reporting date

Subsequently, SANEDI concluded alignment engagements with the DMRE which are crucial in ensuring that as a collective, we continue to work together to address the challenges that South Africa now faces, and to plan ahead for innovative solutions that will transform South Africa's economy through reliable, sustainable and affordable energy.

Acknowledgement

SANEDI has managed to overcome many challenges in the year, including the loss of a key staff member to the Covid- 19 Pandemic. It was within these trying times, that our staff members rallied together to ensure that the vision to which our dearly departed colleague was edging towards, were achieved. It is with much appreciation that I would like to express my appreciation to all SANEDI employees who, through their hard work, commitment to excellence, and passion for their work, have made it possible for us to achieve the spectacular results we have achieved yet again. All the accolades that SANEDI has achieved during the year, would have not been possible without their contribution.

Additionally, we would like to thank our partners who continue to support us, and walk alongside us in the work we do, and we are looking forward to building lasting relationships in the years to come.

Ms Lethabo Manamela CA(SA)
Interim Chief Executive Officer
Date: 25 August 2022

5. STATEMENT OF RESPONSIBILITY AND CONFIRMATION OF ACCURACY

To the best of my knowledge and belief, I confirm the following:

- All information and amounts disclosed in the Annual Report (AR) are consistent with the Annual Financial Statements (AFS). The AGSA has subsequently audited the AFS.
- The AR is complete, accurate and is free from any omissions.
- The AR has been prepared in accordance with the guidelines on the AR as issued by the NT.
- The AFS (Part E) have been prepared in accordance with the standards applicable to the public entity.
- The Accounting Authority (AA) is responsible for the preparation of the AFS and the judgements made in this information.
- The AA is responsible for establishing and implementing a system of internal control, that has been designed to provide reasonable assurance as to the integrity and reliability of the Performance Information, the Human Resources Information (HRI) and the AFS.
- The External Auditors are engaged to express an independent opinion on the AFS.

In my opinion, the AR fairly reflects the operations, performance information, HR, and the financial affairs of the public entity for the financial year ended 31 March 2022.

Yours faithfully

Name: Ms Lethabo Manamela CA(SA)
Interim Chief Executive Officer
Date: 25 August 2022

6. STRATEGIC OVERVIEW

SANEDI's energy development agenda is a key part of our country's energy journey. SANEDI's portfolio of initiatives are closely attuned to technology advancements, declining technology costs, and continued innovation in the energy sector. These can enable South Africa to take full advantage of our energy resources, and the associated infrastructure development as a vehicle for economic growth, industrialisation, employment creation and sustainable development.

6.1 Vision

Sustainable energy for growth and prosperity in Africa.

6.2 Mission

Using applied and energy research, and resource efficiency to develop innovative, integrated solutions that will catalyse growth and prosperity for all in South Africa.

6.3 Values

VALUES	OPERATING PRINCIPLES
Innovative	• creative • proactive • taking charge • initiative • adaptive • entrepreneurial
Integrity	• honest • ethical • accountable • transparent • responsible • trustworthy • respectful
Scientific evidence driven	• analytical • rational • objective • factual • attentive
Development oriented	• educative • continuous learning • transformative
Consultative	• consultative • collaborative • participative • teamwork • engaging
Productive	• punctual • cost conscious • disciplined • compliant
Responsive	• courteous • friendly • client need driven • client focused
Caring	• compassionate • empathy • emotionally intelligent

7. LEGISLATIVE AND OTHER MANDATES

Constitutional Mandate

SANEDI, as an entity of the State, derives its mandate from the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) and relevant Legislative and Policy Frameworks. SANEDI has a functional responsibility towards the technological development and EE in the field of energy (other than nuclear energy), thereby improving the overall energy landscape within the country. The strategy developed by SANEDI seeks to ensure alignment with two critical components of the Constitution, namely:

1) Chapter 2, The Bill of Rights, where: a. Everyone has the right:

    i. to prevent pollution and ecological degradation,
    ii. to promote conservation, and
    iii. to secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development.

2) Schedule 4, The Functional Areas of Concurrent National and Provincial Legislative, specifically with respect to Municipalities and the issue of Local Government matters related to:

    a) Electricity (and gas reticulation).

    SANEDI has a clear role to play, contributing towards an environment that is sustainably utilised for the socio-economic development of the country, as well as municipal development for the distribution of electricity (and potentially other energy sources) to the residents of the country.

Legislative and policy mandates

As a Schedule 3A State-Owned entity (SoE), SANEDI's authority is derived from Section 7(2) of the National Energy Act, 2008 (Act No. 34 of 2008)(NEA). Section 7(2) of the NEA gives effect to SANEDI's powers and functions and provides for its responsibilities as stated below:

SANEDI's Legislative Mandate		
	Energy Research and Development	
	• **Direct, monitor, conduct and implement** energy research and technology development in all fields of energy, other than nuclear energy, and • **Promote energy research** and technology innovation; • Provide for: – training and development in the field of energy research and technology development, – establishment and expansion of industries in the field of energy, and – the commercialisation of energy technologies resulting from energy research and development programmes. • **Register patents** and intellectual property in its name resulting from its activities, • **Issue licences** to other persons for the use of its patents and intellectual property, • **Publish information** concerning its objects and functions, • **Establish facilities** for the collection and dissemination of information in connection with research, development and innovation,	• Undertake any other energy **technology development** related activity as directed by the Minister, with the concurrence of the Minister of Science and Technology, • Promote relevant energy research through **cooperation with any entity, institution or person** equipped with the appropriate skills and expertise within and outside the Republic, • **Make grants to educational and scientific institutions** in aid of research by their staff or for the establishment of facilities for such research, • Promote **the training of research workers** by granting bursaries or grants-in-aid for research, • Undertake **the investigations or research** that the Minister, after consultation with the Minister of Science and Technology, may assign to it, and • **Advise the Minister** and the Minister of Science and Technology on research in the field of energy technology.
	Energy Efficiency	
	• Undertake EE measures as directed by the Minister, • Increase EE throughout the economy,	• Increase the Gross Domestic Product(GDP) per unit of energy consumed, and • Optimise the utilisation of finite energy resources.

SANEDI's operational mandate is also influenced by the following Legislation and policies:-

Legislation

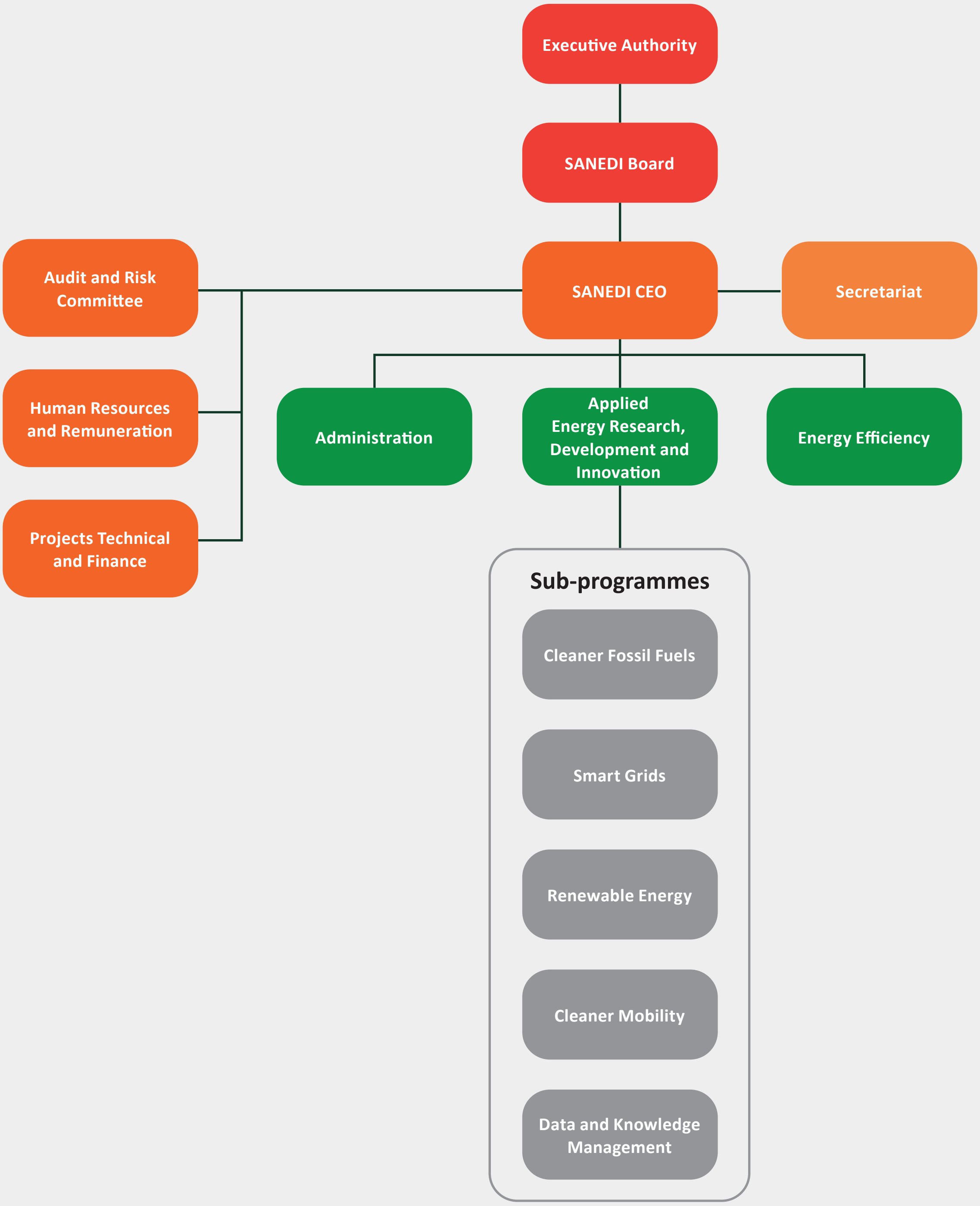
- Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended;
- White Paper on Energy Policy, 1998;
- Petroleum Products Act, 1977 (Act No. 120 of 1977), as amended;
- Central Energy Fund Act, 1977 (Act No. 38 of 1977), as amended;
- Petroleum Pipelines Act, 2003 (Act No. 60 of 2003);
- Petroleum Pipelines Levies Act, 2004 (Act No. 28 of 2004);
- Gas Regulator Levies Act, 2002 (Act No. 75 of 2002);
- Gas Act, 2001 (Act No. 48 of 2001);
- National Energy Regulator Act, 2004 (Act No. 40 of 2004);
- Abolition of the National Energy Council Act, 1991 (Act 95 of 1991);
- The National Environmental Management Act, 1999 (Act No. 107 of 1999);
- The Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002);
- South African Revenue Service Act, 1997 (Act 34 of 1997);

Policies

- National Development Plan Vision 2030;
- Medium-Term Strategic Framework;
- National Energy Efficiency Strategy of the RSA, 2008;
- Energy Security Master Plan for Liquid Fuels, 2007;
- Energy Security Master Plan, 2007;
- Integrated Resource Plan for Energy, 2010;
- Department of Science and Technology 10 Year Innovation Plan;
- Measurement and Verification Guideline for Energy Efficiency Certificates (DRAFT);
- Industrial Policy Action Plan (IPAP) 2010/11 – 2012/13, published Feb 2010;
- Carbon Capture and Storage Road Map;
- Climate Change Response White Paper;
- Draft White Paper on Science, Technology and Innovation.

8. ORGANISATIONAL STRUCTURE

The organogram includes the SANEDI Board directly overseeing the Board Committees: Audit and Risk, Human Resources and Remuneration, Projects Technical and Finance. The SANEDI CEO reports to the Board and oversees three programmes: Administration; Applied Energy Research, Development and Innovation, and Energy Efficiency. Within those programmes are several sub-programmes as shown in the figure below.



PART B: PERFORMANCE INFORMATION

1. Auditor's Report: Pre-Determined Objectives

The AGSA currently performs the necessary audit procedures on the Performance Information to provide reasonable assurance in the form of an audit conclusion. The audit conclusion on the performance against pre-determined objectives, is included in the report to Management, with material findings being reported under the Pre-determined Objectives heading in the Report on other legal and regulatory requirements section of the Annual Auditor's Report. Refer to page 60 of the Report for the AGSA Report, published as Part E: Financial Information.

2. Situational Analysis

2.1 Service Delivery Environment

As an extended arm of Government, SANEDI's activities are geared towards contributing to the service delivery environment, to ensure that energy services are provided in an efficient, cost efficient, an sustainable manner, whilst ensuring that users also play an integral part in ensuring the efficient use of energy.

Slow economic growth and fiscal pressure

The South African economy was unfortunately not spared from the negative effects of the Covid- 19 pandemic, with average growth levels of 3% reported in the first quarter of 2022/23. Unemployment levels reached record highs, especially in the youth category. This implied that Government budgets would be stretched because of competing priorities, and a further need to ensure that people and businesses are cushioned, through various incentives, from the negative impacts of the Pandemic. The impact on SANEDI was that no further funding would be available over and above the current levels of funding. Fortunately, there were no budget cuts in the year under review. Similarly, we also noted that some funders reduced support in some areas, as International Governments also shifted their focus towards their own recovery plans from the pandemic.

Responding to these challenges, SANEDI continued to look for opportunities through partnerships and leveraging the existing Government funding to ensure that work towards its planned activities continued and to secure funding of future activities aligned to the strategic objectives. Responding to Government challenges as an arm of Government, was of paramount importance to us. It was imperative that we also respond to the broader social challenges of youth unemployment, and the impact of Covid -19 on businesses and growth.

In our response, we incorporated within our APP outputs for the year, that we focus on skills training, especially training related to unemployed graduates to increase their chances of employability. Regulations introduced on 8 December 2020 mandated the display of Energy Performance Certificates in buildings by 7 December 2022 as part of the Energy Performance Certificates sub-programme. This area of EPCs is expected to see an increased demand for skills, as more and more building owners strive to comply with regulations. A total of 46 unemployed TVET graduates, were trained under a skills development project that was funded by the GIZ and SANEDI. This resulted in 23 graduates being engaged by 19 companies. Furthermore, SANEDI is also looking to employ some of these young people into the organisation to work under the EPC project. We continue to work with the broader industry to ensure that more of these graduates are engaged into the sector.

Again, through the EE programme, we have supported the private sector companies who had suffered significantly as the lockdown imposed by the Covid-19 emergency, resulted in unavoidable consequences on business profits, forcing some companies to save on their input costs and tax. Through efficient and fast tracking of our internal processes, we were able to assess and approve applications from 39 companies to receive the Section 12L Energy Efficiency Tax Incentive, which we administered on behalf of the National Treasury, and the South African Revenue Service (SARS).

SANEDI also developed an official EPC guideline, to assist building owners and accounting officers to successfully obtain an EPC for their building, to comply with the Legislation before 7 December 2022. The guideline will provide a greater understanding of the EPC regulations, and easy-to-implement processes that allows individuals or businesses to be compliant. Twenty-four EPC's have been issued for commercial buildings in the current reporting period, and this is a positive to the EE sector, and this will inspire more and more building owners to consider measures to improve energy consumption of their buildings and strive for greener, more EE buildings, thus reducing pressure off the National Grid.

Energy Challenges

Energy challenges continue to plague the country, as ESKOM battles to keep the lights on, this continues to have a negative impact on business and society. The continued lack of adequate capacity is likely to result in a loss of investment for South Africa, further exacerbating negative growth and increasing unemployment. Although additional capacity is planned according to the IRP 2019, such capacity is unlikely to be realised in the next 2 to 3 years, thus, there is an urgent need to ensure that other technologies, solutions, processes, and EE interventions that may assist the country in responding to these immediate challenges are identified and developed. SANEDI, therefore remains resolute in investigating, piloting and testing technologies that can support these initiatives.

A simple technology such as Cool Surfaces, can go a long way in reducing energy demand especially during our long summer months, and even during winter with added insulation provided to the building envelope. Not only that, in a country that is still plagued by significant income inequality challenges, and a backlog of housing also resulting in many South Africans living in informal settlements, technology such as this can significantly improve the quality of life, by reducing the heat in the summer months, and again providing insulation in the colder months, however it may not completely remove the need for heating in such informal structures.

SANEDI demonstrated the effectiveness of this technology through multiple Cool Roof coating initiatives in low-income and informal residential settlements, schools, and the Department of Defence (DoD). About 23 local empowerment opportunities were created through these Cool Roof Coating projects in Sharpeville, Cape Town (CT) and the City of Tshwane (CoT). Furthermore, 6000 school learners, including school staff have benefitted from this Cool Roof initiatives, resulting in improved conditions of learning.

Cool Roof Painting initiatives in Masonwabe

Figure 1

Figure 2

SANEDI, in partnership with the South African National Defence Force (SANDF), are working on several large-scale developments, testing the cool bubble effect, that could have significant benefits in countering climate change.

Climate Change

In its Global energy review report: Carbon Dioxide CO_2) emissions in 2021, the IEA noted that 2021 was the worst year when it came to increases in CO_2 emissions, as countries around the world focused on recovering from the Covid-19 pandemic. It was reported that, CO_2 emissions rebounded by 6% to 36,6 billion tonnes compared to pre pandemic levels. The economic recovery has, for the most part, been fuelled by coal, meaning that the recovery from the Covid-19 pandemic was not a green, sustainable recovery. It is also anticipated that the CO_2 levels will not decrease to post Covid levels. Other geopolitical pressures as well, are continuing to have an impact on the transition away from coal, indicating that coal will be with us for some to come. Locally, South Africa still expects to use coal post 2030.

Buildings in South Africa are responsible for nearly 15% of direct CO_2 emissions, it is therefore, crucial that initiatives that address decarbonisation in buildings, are widely adopted by both the private and public sectors. In realising the reduction of CO_2 emissions from buildings, the DMRE through a Regulation on the Mandatory Display of EPCs, is aiming to increase awareness of the energy performance of various building types through captured data. At this stage, SANEDI supports the implementation of the regulation which mainly focusses on a display of EPCs for qualifying buildings, by hosting the building data and issuing the unique EPC registration numbers. However, it is expected that this indicator will encourage the adoption of more EE practices, and interventions aimed at improving building energy performance throughout the building's lifecycle.

In 2021, Electric Vehicles (EVs) sales increased to 9% in the global car market, tough fuel economy and global climate change mitigation actions will continue to grow the EV market. The challenge of greening the public transportation, is another challenge that is being addressed within the SANEDI Cleaner Mobility Programme, as guided by the Green Transport Strategy, which amongst others, proposes several steps to be taken in promoting the uptake of EVs in South Africa. Completed studies during 2021/22 on the greening of Municipalities and municipal fleets, would enable Metros to contribute to cost savings and the reduction of Greenhouse Gases (GHG) in cities.

We have undertaken a study on Roadmap towards Cleaner Fossil Fuels in South Africa. This is a phase 1 study that evaluates and identifies suitable Fossil Fuel technologies, that could be incorporated into feasible energy and technology pathways in the achievement of GHG emission reduction, and eventual net zero carbon. Technologies that are mature, and available commercially with worldwide operations are preferred candidates. The study output can be used for further detailed analysis of the technologies and potential incorporation in future energy planning processes.

Waste to Energy

SANEDI's commissioned research study on the potential for biogas in South Africa, found that biogas has the potential to generate 2.5MW of electricity in South Africa, with a market potential of R10 billion. It further indicated that biogas has the potential to reduce rural energy poverty, reduce urban organic waste on landfill sites, and boost employment and business opportunities using affordable micro-digester technologies. The technology was further demonstrated at two military bases in the Limpopo Province.

Participants on Biogas project in Makhado Local Municipality

Figure 6

Figure 7

PlasWen Technologies

We have partnered with the South African Energy Nuclear Corporation (NECSA), on capacity building initiatives and a pilot project to develop a proof of concept for an environmentally friendly mobile waste gasification and waste to energy proof of concept, using NECSA's Plasma Gasification Waste Treatment (PlasWen) technology. The PlasWen technology comprises a small-scale, mobile container unit which treats green waste and other combustible materials. It can treat between 0,2 to 0,5 tonnes of wood chips per day and generate approximately 10 to 25 kW of electricity. Such technologies are crucial, especially in demonstrating other possible technologies that can expand our current energy mix making with the possibility of waste and biomass, to feature prominently as part of the energy mix. This prototype was successfully demonstrated to SANEDI on 10 February 2022, and we will be looking to deploy this technology at a waste facility in the near future as we continue to investigate possibilities in this regard.

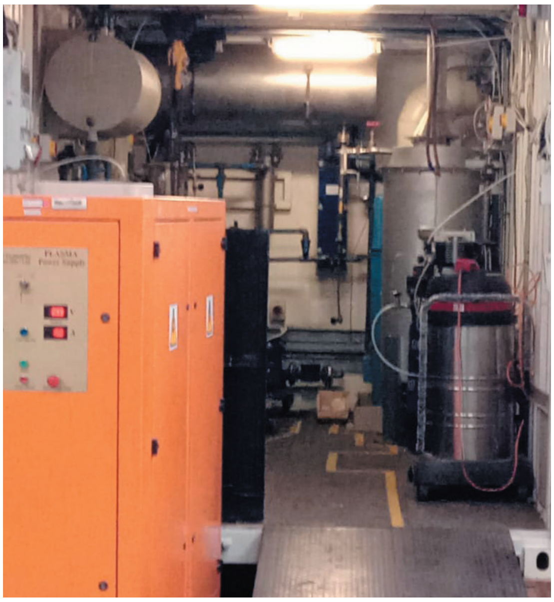


Figure 3: PlasWen Pyrolysis Technology

Figure 4: Externally Coupled Mobile Generator

Figure 5: Improved PLC

Battery Technologies

SANEDI supported Research and Development (R&D) in upgrading MLT Inverters which is capable of interfacing with a Battery Management Systems (BMS) on a Controller Area Network (CAN) communication bus. The CAN has become the de facto standard for communication with Battery Management Systems, while traditional inverters inject the same current on all 3 phases in a 3-phase topology. SANEDI supported research to design next generation smart inverters which redistribute power to increase line capacity and decrease line losses. This is done in real-time by applying specialised line impedance measurement techniques.

Data and Knowledge Management

The Data and Knowledge Management programme completed research projects around, residential energy consumption, focussing on appliance usage across all income groups in the country, as well as determining the energy savings potential in the South African Pulp & Paper and Automotive sectors. Furthermore, during 2021/22 about 73 youth graduates were empowered under the Data and Knowledge Management Programme, to assist with the Wastewater Treatment and EPCs projects.

Smart Grids

Through the SMART Grids (SG) programme, SANEDI assisted in finding robust and sustainable solutions to address the Municipality energy debt crisis, through relevant technology and data solutions that solve both energy measurement concerns, and shortfalls in Financial Management capacity. Research conducted during 2021/22, assists in enabling strategic management of Electricity Distribution Assets, that is key to addressing the current revenue challenges being experienced within Municipalities in South Africa.

Just Transition

BusinessTech in July 2022 published that President Cyril Ramaphosa recently supported Green-lit, the Just Transition Framework that advocates for a massive expansion of RE, battery storage, new energy vehicles, green minerals, and the hydrogen economy. The framework entails an agreement between South Africa, the United Kingdom (UK), United States (US), Germany (DE), France (FR) and the European Union (EU) to grant access to an $8.5 billion investment in the shift away from Fossil Fuels.

Whereas the South African Government is facing calls to review South Africa's petrol price, experts are of the view that South Africa is left behind by the rest of the world in rolling out EVs. As of March 2022, we are pleased to announce collaboration with Development Bank of Southern Africa (DBSA) on the implementation of a Global Environment Facility (GEF) funded project, on accelerating the shift towards electric mobility in South Africa. This partnership resulted from an ongoing DBSA Stakeholder consultation process, which indicated that SANEDI is better positioned to play the role of an executing agency, implementing the day-to-day activities of the project.

2.2 Organisational environment

The Organisation faced a disruption in its leadership, as the term of the Board expired in November 2020, and the Organisation commenced the 2021/22 financial year without a Board in place for most of the year, with the Board only being appointed in January 2022. However, during the period without a Board, the Interim CEO and Executive Committee (EXCO) group put measures in place to ensure continuity in the Organisations operations ensuring good Governance, with the establishment of an Audit and Risk Committee (ARC) in October 2021 to provide the necessary oversight.

The ongoing Covid-19 pandemic resulted in a predominantly Hybrid work environment, which the Organisation managed so well, that performance did not suffer as a result. Adequate measures were put in place to ensure continuity and reduce disruption to remote working, including ensuring adequate Information Communications Technologies (ICT) infrastructure, that enabled people to work from home, have online meetings and for teams to collaborate virtually from anywhere in South Africa.

SANEDI experienced several organisational risks and uncertainties because of the Covid-19 pandemic. The risk of employees getting infected by the spreading virus was of major concern, and field work in some projects were guided by applicable Covid-19 regulations during the year. SANEDI unfortunately lost a key member of its Management team, General Manager of SGs and the Energy Secretariat Dr. Minnesh Bipath because of the Covid-19 pandemic.

2.3 Key Policy developments and Legislative changes

SANEDI supported the development of new EE lighting regulations and general service lamps for South Africa that were gazetted in March 2021 by the Minster of Trade, Industry and Competition (DTIC), and played a significant role in encouraging the public via multiple media platforms, to comment on the regulations. The regulations set out to improve the safety, performance and EE of light bulbs approved for use in South Africa by phasing out inefficient and environmentally harmful lighting products. SANEDI believes the gazetted regulations are a milestone in the journey towards a more environmentally sustainable country.

The Minister of Mineral Resources and Energy gazetted the EPC regulations for classes of buildings in both the public and private sector on 8 December 2020, with SANEDI mandated to develop, host, and maintain the National Energy Performance Building Register (NEPBR). EPC related activities gained recognition, as well as contributing to a UK Partnering for Accelerated Climate Transitions (UK-PACT) funded project to operationalise EPCs in South Africa, and to ultimately develop a world class Terms of Reference (ToR) for the NEPBR in South Africa. Stellenbosch University (SU) succeeded in becoming the first recipient in South Africa to be awarded an EPC for their main administrative building during this reporting period.

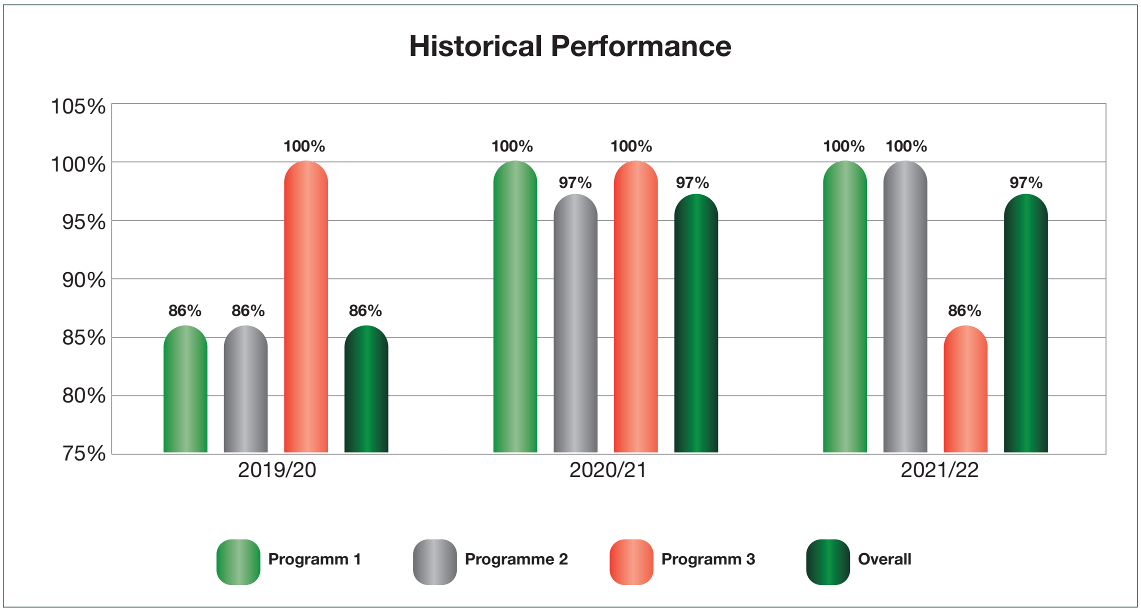
2.4 Progress towards achievement of institutional Impacts and Outcomes

Renewable Energy projects such as Cool Roof Surfaces and the development of an Energy Efficiency Lighting ‘tool’ (Application) were undertaken to demonstrate electricity cost savings. Through technology awareness, SANEDI launched this Energy Efficiency Lighting (SEEL) tool that would enable energy savings and CO_2 reduction. The tool then offers various EE lighting solutions including costing and return on investment predictions.

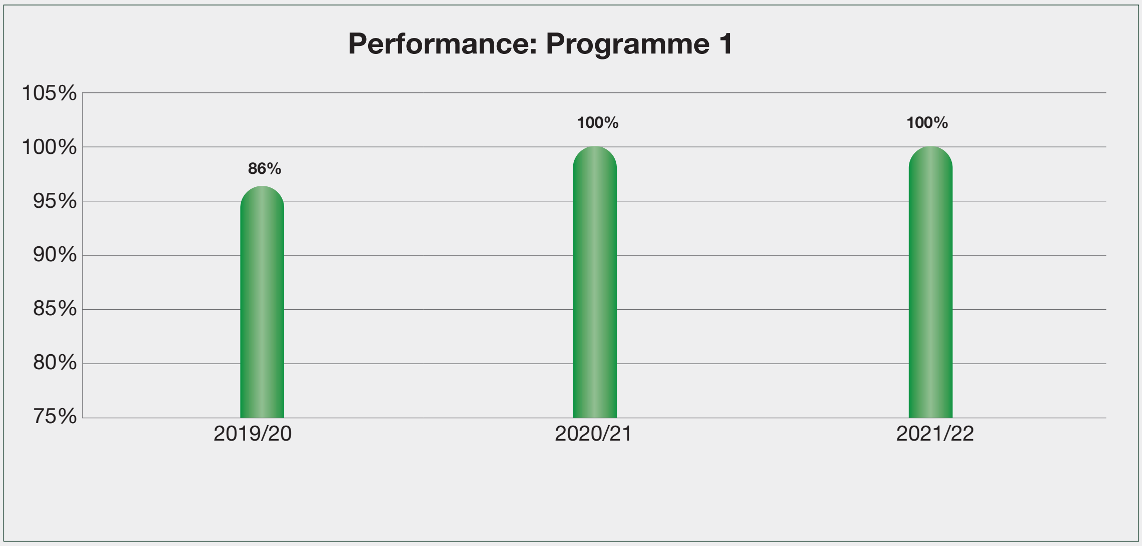
SANEDI is committed to the National strategic outcome for “Evidence-based planning, resource allocation and decision-making, enabled by accurate and timely information, datasets and data analytics.” SANEDI also conducted research in supporting the National strategic outcome of “Smart Grid systems piloted for Smart Cities”. A Smart City uses Information ICT to enhance its liability, workability, and sustainability.

Through our Cleaner Fossil Fuel programme, we have committed to the National strategic outcome to reduce GHG emissions by responding to climate change combat. These Roadmaps do not dictate technology choice but provide options indicating which technologies are relatively more efficient and their contribution towards GHG emissions reduction. In support of the strategic outcome “Clean Municipality Fleet, Public and Private Transport System” we have conducted research on Cleaner Mobility.

3. PROGRAMME PERFORMANCE INFORMATION



3.1 Programme 1: Administration



The **purpose** of Administration is to create an effectual delivery environment for SANEDI that is fully compliant with all statutory requirements. This programme comprises of eight sub-programmes as listed below:

The outcome of Administration is *universal to all the* sub-programmes, *it is:-* ***"A capacitated, effective and efficient operational environment (within which SANEDI will discharge its mandate)- internal compliance".***	**Sub-Programmes**	**Human Resources**	**Information and Communications Technology**
	Purpose	Ensuring available, competent and happy staff.	Support efficient operations and ensuring data processing, integrity and availability.
	Sub-Programmes	**Corporate Services**	**Financial Management**
	Purpose	Incorporating all lines of business and support activities relating to the Board and Board Committees.	Including all lines of business and support
	Sub-Programmes	**Supply Chain Management**	**Corporate Communications**
	Purpose	Including all lines of business and support activities relating to effectual Supply Chain Management(SCM) and compliant procurement processes.	Including all lines of business and support activities relating to effectual communications including Stakeholder engagement, client satisfaction surveys, public awareness campaigns in collaboration with the DMRE and media intelligence.
	Sub-Programmes	**Shared Logistics**	**Project Management Office**
	Purpose	Including shared facilities/resources shared by all Managers to ensure a conducive and productive working environment. Ensure adequate project selection resource allocation, Project Management and performance monitoring.	Encourage communication within and between projects. Provide strategic and operational support, reports and recommendations to Project Managers and Sponsors. Facilitate transparency and compliance from a Legislative and Governance perspective.

Highlights

- **Human Resources**

SANEDI started its Organisational Review during 2020 as per the recommendations of the Board. Part of the review, is the new Organisational Structure that was approved by the Board in November 2020. During 2021/22, a process of implementing the new structure was commenced. Consultation with affected employees was conducted and packages were remunerated. Some employees were re-employed on a contract basis to complete/close off the projects.

As per Legislation, SANEDI was required to submit the Employment Equity Plan (EEP) to the Department of Labour (DoL) by January 2022. This was done to enable SANEDI to achieve reasonable progress towards Employment Equity (EE), and to achieve equitable representation of employees from designated groups by means of Affirmative Action measures.

- **ICT**

The ICT Department's primary focus was to enable business to perform its duties while working remotely from home during the Covid-19 lockdown. ICT has heavily invested in technologies that enabled SANEDI to operate from alternate locations. This financial year was no different. The focus of ICT was the implementation of systems that would automate repetitive tasks within the organization, and most importantly, these tasks would be performed from an alternate location. A Project Management-based system was developed to assist SANEDI with the implementation of large projects. ICT has also improved the speed of its internet connection to allow remote working and cater for the hosting of Business databases.

- **Finance**

In September 2021, SANEDI participated in NT 2022 Medium Term Expenditure Framework (MTEF) budget period. Departmental budgets, and the financial status of the entities and various budget proposals were discussed.

At the end of July 2022, the audited Financial Statements were approved, with the entity receiving an unqualified audit. An unqualified audit means that there is reasonable assurance that the internal controls implemented are functioning, although some improvements are required for the entity to achieve a Clean Audit report. Nonetheless, this means that the target as set out in the APP for unqualified audit has been achieved, and provides reasonable assurance to our Stakeholders that the Financial Statements as at 31 March 2021 are presented fairly, in all material respects.

- **Project Management Office (PMO)**

The Project Management Committee (PMC) in line with the approved ToR for this Committee was able to exercise its role in evaluation, assessment and recommending suitable projects for approval to EXCO. The PMC aims to improve oversight of the overall SANEDI Project Management systems, which include project Governance. All project proposals are subject to an independent, and rigorous evaluation by the PMC using a pre-determined project evaluation criteria. The process ensures the correct projects are undertaken by SANEDI.

- **Risk Management**

Through our Risk Management system, risks associated with the implementation of the Strategic Plan (SP) and APPs were monitored. Historical performance indicates that current systems are appropriate and have not resulted in the materialisation of any of the identified risks. The function is also significantly under resourced and measures to ensure that there is adequate capacity with Risk Management will be pursued. The focus of Risk Management is to ensure that Business and Operational Risks are mitigated by various risk owners. The impact of Risk Management is to monitor and reduce the impact of risks that are threatening the organization and improve on the action plans to mitigate risks.

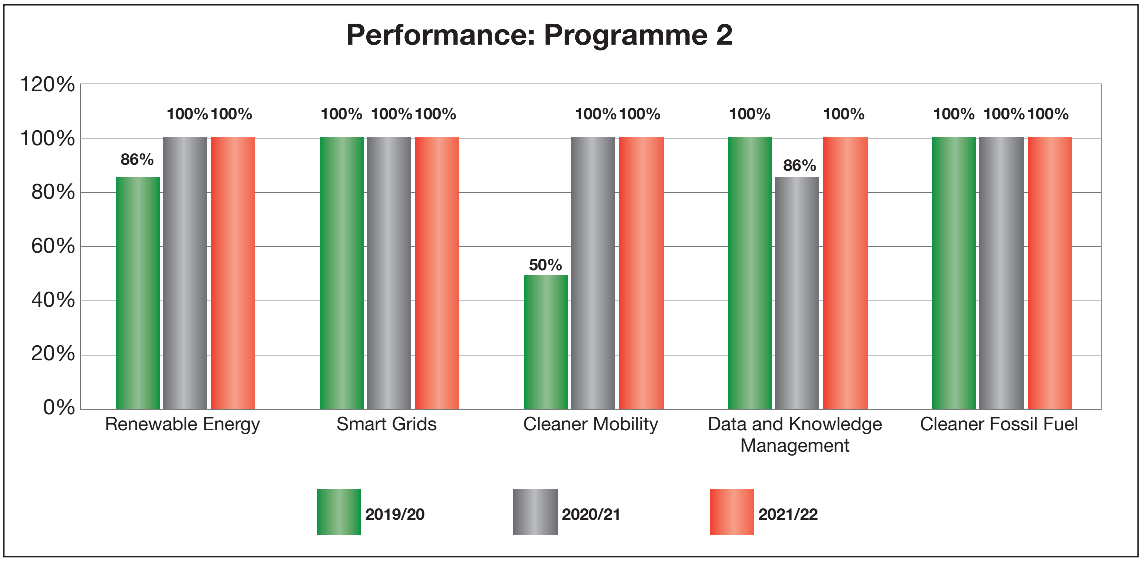
LINKING PERFORMANCE WITH BUDGETS

Programme	2021/22 Budget	2021/22 Actual figure	Variance
Programme 1	46 564	47 304	-740
Programme 2	20 136	17 740	2 396
Programme 3	25 145	15 588	9 557
Total	**91 845**	**80 632**	**11 213**

3.1.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Administration 100 % targets achieved during 2021/2022									
	Outcome	Output	Output Indicator	Audited Actual Achievement 2019/20	Audited Actual Achievement 2020/2021	Planned Annual Target 2021/2022	Actual Achievement 2021/2022	Deviation from planned target to Actual Achievement 2021/2022	Reasons for deviations
1.1	A capacitated, effective and efficient operational environment (within which SANEDI will discharge its mandate)-internal compliance	Critical business risk factors identified, managed as per Risk Management plan.	Percentage critical strategic and operational risks factors are identified and mitigated.	100 % Achieved	>90% Achieved	>90%	100%	10 %	All planned actions to mitigate risks have been implemented in line with the Risk Management plan.
1.2		Implemented Corporate Stakeholder Engagement Plan(SEP).	Percentage implementation of SEP.	75 % Achieved	85 % Achieved	85 %	85 %		
1.3		Implementation of corporate ICT plan.	Percentage implementation of corporate ICT plan.	94 % Achieved	80 %	80 %	100 %	20 %	Target overachieved as the anticipated APN from the MTN project was completed before the actual anticipated time. This is mainly due to the aggressive drive for MTN to deliver the solution to SANEDI within its financial year.
1.4		Unqualified audit	Unqualified audit	Achieved	Unqualified audit	Unqualified audit	Achieved		
1.5		Personnel trained as per Workplace Skills Plan(WSP).	Percentage of personnel trained as per WSP.	80 % Achieved	100%	80 %	85%	5 %	More employees attended training than stipulated in the Energy & Water Sector Education Training Authority(EWSETA) training plan.
1.6		Filled funded positions.	Vacancy rate of funded positions.	5 % Not achieved	<5%	<5%	4,25%	-0,75 %	2/47 (4.25%) positions are vacant, Including SG Project Manager and CEO appointment in progress
1.7		Employment equity targets adhered to.	Percentage deviation from Employment equity targets maintained within acceptable range.	>5% Achieved	<5%	<5%	2.04%	-2,96 %	One Indian male appointed. One person living with disability appointed (1/49 =2.04%).

3.2 Programme 2: Applied energy research, development and innovation



The ***purpose*** of Programme 2 is to facilitate knowledge creation that can support energy-related planning and decision-making and accelerating the transformation of the energy market and landscape in the country. This programme is comprised of 6 sub-programmes with different focus areas, but all ultimately contributing to the same strategic outcomes..

Sub-programme	Purpose	Outcomes
Renewable Energy	Support the accelerated and informed development of South Africa's clean energy portfolio and RE sector.	• An awareness of the technologies to be used in the transition process (for an increasingly aware society on energy transition solutions). • Smart City. • Evidence-based planning, resource allocation and decision-making enabled by accurate and timely information, datasets and data analytics. • Clean Municipal Fleet, Public and Private Transport System. • Demonstrated GHG emissions mitigation potential in support of National commitments. • Evidence-based planning, resource allocation and decision-making enabled by accurate and timely information, datasets and data analytics. • Demonstrated GHG emissions mitigation potential in support of National commitments.
Smart Grids	Demonstrate and assess intelligent energy system infrastructure as an enabler for municipal sustainability.	
Data and knowledge management	Collation, development and utilisation of credible, objective and high-quality data and information relating to the areas of SANEDI's responsibility.	
Cleaner Mobility	Developing CM solutions for urban transportation.	
Cleaner Fossil Fuel	Alternative low carbon energy and mitigation options, to limit serious negative environmental impacts from conventional energy sources.	

3.2.1 Renewable Energy

South Africa is demonstrating its commitment to a more sustainable future growth path by supporting Renewable Energy (RE) and Energy Efficiency (EE) measures, together with skills development and job creation through fostering a Green Economy. SANEDI undertook Renewable Energy (RE) technology projects that demonstrated electricity and cost savings, GHG emissions mitigation potential and skills development in support of National commitments. Market and the industry were promoted and/or further developed, and technology fit for purpose was tested. During 2021/2022 about 66 youth empowerment prospects emerged through Renewable Energy (RE) initiatives

Highlights

- **Biogas for Department of Defence (DoD)**

The biogas plants at the two military bases, have been installed with support from the SANEDI, and re-cycled kitchen food waste that is normally sent to landfill into biogas, which will reduce the amount of coal-fired electricity used in one kitchen, and virtually eliminate the use of Liquid Petroleum Gas(LPG) in the other. The biogas plants are expected to reach full production early in the new year. Biogas technologies like micro-digesters, possess potential for scaling and promoting a green circular economy. It is the only fully closed circular RE system which produces near zero waste. Capacity building was realised with 16 youth being benefitted.

- **Thermal Laboratory**

SANEDI, in partnership with Council for Scientific and Industrial Research(CSIR) have established a Thermal Laboratory that will test, and compare a range of low carbon technologies, and develop business cases for implementation of the most effective solutions at different scales. The first of these collaborations will focus on solar water heating potential, using different solar technology solutions.

- **Energy Efficient Lighting (SEEL) training**

The training on SANEDI Energy Efficient Lighting(SEEL) tool was delivered at the request of Bidvest to their facility Managers. The syllabus encompasses an overview of energy and EE implementation. Subsequently, the participants are trained on how to use the online tool and mobile device APP when assessing lighting at a facility. The tool then offers various EE lighting solutions, including costing and return on investment predictions. Should the solution be implemented, the immediate result will be reduced electricity consumption leading to cost and GHG savings. Uptake of SEEL technologies would have a positive impact for the economy. Feedback from this course, included the value that it added to the facilities Managers who will now be able to use the online tool when upgrading their facilities with more efficient hardware. Implementation of EE hardware leads to energy cost savings and GHG savings. This also led to a further collaboration between SANEDI and Bidvest on the use of the SEEL tool.

- **Department Of Defence (DoD) Decision Makers Seminar**

During 2021/22 financial year, SANEDI delivered a seminar to 13 commanding officers of the military bases in Limpopo Province, and nine youths were empowered through capacity building. This seminar showcased the exciting projects already implemented, specifically focusing on the Southern African Solar Thermal Training & Demonstration Initiative (SOLTRAIN) Solar Water Heating project at Air Force Base Hoedspruit (AFBH), as well as those under planning, highlighting the savings and performance of these projects.

- **Plasma Waste-to-Energy Project (PlasWen)**

A robust engineering design was done on the Proof-of-Concept operational improvements required to optimise the unit. Improvements included control valve automation, improvements to the PLC, and water flow regulation. The PlasWen pyrolysis technology burns Municipal Solid Waste (MSW) with high calorific content. The technology will reduce waste to landfills, thus reducing the production of methane released into the atmosphere (Greenhouse Gases). Methane has a global warming potential 21 times more potent than Carbon Dioxide (CO_2). In addition, electricity can be used for auxiliary site use. Any residual production can be supplied into the municipal grid (green energy). The technology is at the proof-of-concept stage and was successfully demonstrated to SANEDI on 10 February 2022. We have further partnered with South African Nuclear Energy Corporation SOC Ltd (NECSA) on capacity building initiatives about PlasWen.

3.2.1.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Renewable Energy

Renewable Energy 100 % targets achieved during 2021/2022									
Outcome		Output	Output Indicator	Audited Actual Achievement 2019/20	Audited Actual Achievement 2020/2021	Planned Annual Target 2021/2022	Actual Achievement 2021/2022	Deviation from planned target to Actual Achievement 2021/2022	Reasons for deviations
2.1	Demonstrated GHG emissions mitigation potential in support of National commitments.	Smart public facilities Pilots and studies (Renewable Energy SANEDI driven initiative contributing towards GHG reduction).	Number of energy solutions assessed (advisory notes, feasibility reports, complete study reports, case studies, technology roadmaps and operational demonstration facilities).	1/1	4/4	4	4		
2.2	An awareness of the technologies to be used in the transition process (for an increasingly aware society on energy transition solutions).	Reports and analysis from Stakeholder engagements.	Number of energy-related knowledge sharing events / platforms engaged in (own hosted, attended, knowledge presented, supported.	3/3	6/6	4	15	11	There was increasing demand for the events as we were invited to deliver more events.
2.3		Clean energy technologies training in the sector (including Municipalities).	Number of recipients of energy related training facilitated.	85/85	120/120	120	161	41	Overachieved due to additional opportunities to deliver training within renewables and working for energy (closed out projects).
		Research publications reflecting clean energy insights.	Number of annual Energy industry status report (insights, trends, international and National collaboration decisions, interfacing, and forums).	1/1	1/1	1	4	3	More inputs were possible for additional insights, and it was feasible to produce more publications than planned. Writing of these publications required in-house expertise and did not require any cost.

Renewable Energy
100 % targets achieved during 2021/2022

Outcome	Output	Output Indicator	Audited Actual Achievement 2019/20	Audited Actual Achievement 2020/2021	Planned Annual Target 2021/2022	Actual Achievement 2021/2022	Deviation from planned target to Actual Achievement 2021/2022	Reasons for deviations
Evidence based planning, resource allocation and decision-making enabled by accurate and timely information, datasets and data analytics.	Information and data made available for policy development.	Number of energy solutions assessed (advisory notes, feasibility reports, complete study reports, case studies, technology roadmaps and operational demonstration facilities).	Introduced from 2021/2022		2	2		
	Accessible and high-quality data: maintain three energy-related datasets.	Minimum number of energy-related datasets maintained per annum.	1/1	3/3	2	2		
Energy transition expertise and competence building enabled.	Training modules and programmes relevant to the current environment.	Number of policy support instruments (industry roadmaps, sector development plans and industry support tools, etc).	1/1	1/1	1	1		
	Training programmes as well as trained, skilled participants.	Number of recipients of energy related training facilitated.	Introduced from 2021/2022		40	40		
	Energy Research students and researchers supported.	Number of energy-related research students / contracted researchers supported (e.g. bursaries, non-bursaries, contract opportunities, infrastructure support, etc).	0/1	1/1	1	1		

3.2.2 Data & Knowledge Management

The Data and Knowledge Management Programme, was initiated to provide a mechanism for energy modelling and planning in support of the alignment of National and local Government energy data objectives. The Data and Knowledge Management Programme completed projects that supported residential energy consumption, the pulp & paper and the automotive sectors. During 2021/2022, 88 youth were empowered under the Data and Knowledge Management Programme through the Wastewater Treatment, Energy Performance Certificates (EPC's) and Industrial Energy Efficiency projects.

Highlights

- **National energy programmes for which data is available / captured**

Disaggregated data was collected from plants within the Pulp & paper and Automotive sub-sectors, namely: Mondi, Mpact, Sappi, Volkswagen, BMW. This data was utilised to establish the energy footprint and savings potential for EE interventions. In addition, key insights into the benefits, and potential for EE interventions within both sub-sectors through the deployment of energy management systems to drive plant efficiencies were explored. Data captured through the implementation of this project, will further support the DMRE Target Monitoring System for EE developed to monitor EE projects in South Africa.

- **Capacity building Motor Systems Optimisation (MSO) and Pumps Systems Optimisation (PSO)**

SA IEEP II: The South African Industrial Energy Efficiency Phase II (SA IEE Phase II) Project, essentially focuses on promoting Industrial Energy Efficiency (IEE) through further accelerating, and mainstreaming the adoption of Energy Management Systems, and Energy Systems Optimisation within the South African industry and ensuring the outcomes of the SA IEE Project are expanded and become sustainable market orientated fixtures within the National industrial landscape. The South African Energy Efficiency Confederation (SAEEC) was appointed to provide training for ten officials on Motor Systems Optimisation (MSO) and Pumps Systems Optimisation (PSO) through a sole source motivation. These United Nations Industrial Development Organization (UNIDO) approved training topics are only offered by the SAEEC.

The training focused on developing in-house skills for the GEF-UNIDO IEE project, and for long term application in other related projects. The implementation team of the IEE project includes SANEDI colleagues within the EE Programme, and colleagues from the DMRE.

- **Sector Reports - (Residential energy consumption)**

SANEDI in collaboration with the University of Cape Town (UCT) conducted a thorough analysis of the residential energy sector within South Africa. Two Sector reports were developed to outline the findings of the study to provide an analysis of the impact of EE for the Residential sector through the Standards & Labelling (S&L) Programme. These reports are categorised as follows:

- **Residential Energy Consumption Paper 1:** Review of Residential EE targets in South Africa: In this study, the analysis of energy savings as they related to post 2015 NEES targets, is analysed using a Low Emissions Analysis Platform(LEAP) model. In relation to the assessment of the post-2015 NEES targets, the model results indicate that if the S&L and Minimum Energy Efficiency Performance Standards(MEPS) programmes continued in their current form, with appliance standards at the current level, they would achieve a saving of 10% in 2030.
- **Residential Energy Consumption Paper 2:** Residential Appliance Electricity Use in South Africa - The purpose of this study was, to create a bottom-up National disaggregated estimate of residential electricity consumption calibrated to the best top-down National estimate available. Furthermore, this study focused on low, middle, and high-income groups, with further analysis into each income group, appliance penetration rates, together with appliance mean annual energy consumption estimates used, to approximate the National annual electricity consumption of the residential sector under a range of scenarios. The post 2015 NEES target for the residential sector is then reviewed against, (i) appliance efficiency targets and (ii) likely savings impacts to 2040 compared to a reference case where no substantial improvements are made in appliance efficiency, other than lighting, from 2020 onwards.

- **Energy data related training to support Wastewater Treatment Plants (WWTPs) in South Africa**

As part of the European Union General Budget Support 4 (EU-GBS 4), Wastewater Treatment Plants (WWTPs) project, 100 Government officials were scheduled for EE training. The purpose of the course was to provide attendees with a step-by-step approach to establish a robust, and sustainable energy data collection and management program, the foundation for strategic energy management. About, 100 individuals were invited for the training session, with 22 remotely connected during the half day session.

In-line with the pre-feasibility studies project to be conducted on 14 WWTP's across South Africa, 28 fieldworkers have been appointed to support with data collection and data analysis. A training outline was developed, and training was delivered to equip the fieldworkers with the correct skills to conduct energy audits in support of Energo Power solutions (the appointed service provider), by collecting and analysing data within selected WWTPs. In addition, the fieldworkers were trained to determine current energy consumption, and energy savings potentials that could be achieved from the installation of high efficiency technologies such as LED lights, motors, variable speed drives and solar Photovoltaics (PV) systems (where applicable). The training was conducted virtually using University of Pretoria's (UP) blackboard platform during Quarter 4. Some of the topics include EE, Energy Management & Audits. Energy data related training adds value to wastewater treatment across various Municipalities for possible intervention through future projects. Training of the fieldworkers saved the Municipal officials the extra effort of gathering the required project data, thereby saving SANEDI time on the project.

- **Energy Performance Certificates (EPC's)**

In DMRE/SANEDIs efforts to influence education and awareness of EPC's, an EPC guideline has been developed to assist building owners and Accounting Officers to successfully obtain an EPC for their building. The guideline will provide a greater understanding of the EPC regulations, and easy-to-implement processes that allows individuals or businesses to be compliant.

The EPC guideline was well received in the industry, and various industry experts commended this great initiative of the DMRE and SANEDI. The development of the EPC guideline has contributed to the education and awareness of EPCs through focus groups held with relevant Stakeholders, and these included architects, engineers, financial companies, accredited inspection bodies, energy companies, associations and educational institutions and Government officials. Stakeholders felt that the EPC guideline would assist building owners as they comply with the EPC process. About 46 Electrical Engineering graduates were trained as part of the EPC practitioner's skills programme

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3.2.2.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Data & Knowledge Management

Data and Knowledge Management 100 % targets achieved during 2021/2022								
Outcome	**Output**	**Output Indicator**	**Audited Actual Achievement 2019/20**	**Audited Actual Achievement 2020/2021**	**Planned Annual Target 2021/2022**	**Actual Achievement 2021/2022**	**Deviation from planned target to Actual Achievement 2021/2022**	**Reasons for deviations**
Evidence based planning, resource allocation and decision-making enabled by accurate and timely information, datasets and data analytics.	Data repository of all sustainable energy programmes (data collection).	Number of National energy programmes for which data is available / captured.	New indicator from 2021/2022		4	4		
	Detailed analytics reports containing data and insights of priority subsectors identified by the DMRE to inform National strategies.	Sector Reports (automotive, pulp and paper, residential sectors).	New indicator from 2021/2022		3	3		
	Sector data analysis and modelling capability.	Fully functional Data and Knowledge Management(DKM) facility in-house within SANEDI.	New indicator from 2021/2022		1	1		

Data and Knowledge Management 100 % targets achieved during 2021/2022								
Outcome	**Output**	**Output Indicator**	**Audited Actual Achievement 2019/20**	**Audited Actual Achievement 2020/2021**	**Planned Annual Target 2021/2022**	**Actual Achievement 2021/2022**	**Deviation from planned target to Actual Achievement 2021/2022**	**Reasons for deviations**
An awareness of the technologies to be used in the transition process (for an increasingly aware society on energy transition solutions).	Reports of engagements with relevant Stakeholders on data access.	Number of engagements with key Stakeholders relating to data access.	New indicator from 2021/2022		8	8		
	Training on quality processing and analysis of data (data collection tools, quality processing of data and interpretation of data).	Number of recipients of energy related training facilitated.	n/a	32/50	10	60	50	The training was oversubscribed exceeding our initial expectations as this was new training. The training covered all areas of EE ranging from buildings to WWTP's and also process efficiency. Participants found this appealing.
	Research publications reflecting clean energy insights.	Number of annual Energy industry status report (insights, trends, International and National collaboration decisions, interfacing and forums).	1/1	1/1	1	1		
	Training modules and programmes relevant to the current environment.	Number of training modules relating to data.	New indicator from 2021/2022		2	2		
Energy transition expertise and competence building enabled.	Energy data analytics students and researchers supported.	Number of energy data analytics related research students / contracted researchers supported (e.g. bursaries, non-bursaries, contract opportunities, infrastructure support, etc).	New indicator from 2021/2022		1	1		

3.2.3 Smart Grids

SANEDI in collaboration with the DMRE developed and piloted the concept of Smart Grids in South Africa. The focus of the programme is on “Technology as an Enabler for Change” in the municipal environment. Smart Grid programme would realise Smart Cities in South Africa and assist in solving the municipality energy debt crisis through relevant technology and data that solve both energy measurement concerns and shortfalls in financial management capacity. Conducted research during 2021/2022 enables strategic management of Electricity Distribution Assets that is key to addressing revenue challenges within municipalities in South Africa

Highlights

- **Smart Distribution Asset Management Electricity Assessment Framework for Municipalities**

A research project on Smart Distribution Asset Management Electricity Assessment Framework for Municipalities, has been conducted and completed during the year. This research project provides a framework that is designed to understand the current state of Municipalities embarking on an Asset Management journey. There is currently no Asset Management Framework for Municipalities in South Africa, and therefore this research will assist Municipalities to implement Asset Management practices.

- **Smart Revenue System Design Project**

SANEDI in partnership with the UP is conducting research on Smart Revenue System Design. The research encompasses different deliverables which include literature studies, Analysis of revenue system design best practices and a final report. The research project focussed on review of National Standards for Advance Metering Infrastructure (NRS049), review of SG architecture model and the analysis of Revenue System Design best practices. The objective of this research project is to review current standards and practices, and to provide a unified approach to Smart Revenue System Design.

Service delivery challenges in local Government have exposed some uncomfortable truths about the state and wellbeing of Municipalities. Advanced Metering Infrastructure (AMI) is the heart of SG’s. Smart Revenue System Design is critical to the success of AMI technologies. This includes the meter, MDMS system, vending systems, GID, etc.

- **The Effects of Electric Transportation on the Power Distribution Network Assets project**

The Effects of Electric Transportation on the Power Distribution Network Assets research is being conducted by the UP in partnership with SANEDI. The research investigates the risks of EVs on the distribution network, and further present effective strategies for managing power distribution network assets with a high penetration of EVs. The research includes several literature studies. This project has been completed and signed off by SANEDI. Aspects covered in research include Literature study on e-mobility and the power grid, the distribution network load characteristics and equipment, Electric vehicle charging systems and vehicle to grid system, and opportunities and challenges with integrating EVs into the distribution grid.

The integration of EVs in the distribution network may create new challenges to the Distribution System Operator (DSO), such as congestion situations in the network, and in the HV/MV (high voltage/medium voltage) power transformers. This research will assist Municipalities to adapt to increasing penetration of e-mobility on their networks.

- **The Development of Smart Distribution Asset Management Assessment Toolbox for Municipalities in South Africa Project**

The Smart Distribution Asset Management Assessment Toolbox is a web-based toolbox which will provide Municipalities a platform to determine their Asset Management readiness state. The project has been completed and presented to SANEDI. With the use of the toolbox, an Asset Management assessment was conducted in two organisations namely Cape Agulhas Municipality and Eskom transmission. The results of the assessment can help organisations make progress on their Asset Management planning. This assessment focused on System requirements development, System architecture development, Database design, Review and testing, and fully functional Web toolbox.

3.2.3.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Smart Grids

Smart Grids 100 % targets achieved during 2021/2022								
Outcome	**Output**	**Output Indicator**	**Audited Actual Achievement 2019/20**	**Audited Actual Achievement 2020/2021**	**Planned Annual Target 2021/2022**	**Actual Achievement 2021/2022**	**Deviation from planned target to Actual Achievement 2021/2022**	**Reasons for deviations**
Smart Grid piloted for Smart Cities.	Smart Grid.	Number of energy solutions assessed (advisory notes, feasibility reports, complete study reports, case studies, technology roadmaps and operational demonstration facilities).	5/5	3/3	4	4		
		Annual energy industry insight (trends) publication reflecting insights from extensive International and National collaboration, interfacing and forums.	1/1	1/1	1	1		
		Number of industry roadmaps, sector development plans and industry support tools developed to promote energy related market/industry development.	New indicator from 2021/2022		1	1		

3.2.4 Cleaner Mobility

The role of the Cleaner Mobility Programme is to investigate and demonstrate alternative ways of mobility that will lead to the improvement of the environmental, social and economic conditions. Completed studies during 2021/2022 on greening of Municipalities and Municipal fleet would enable metros to contribute to cost savings to the reduction of GHG in cities.

Highlights

- **Development of business case for Greening of Metropolitan Cities vehicle fleet study**

The study seeks to assess the feasibility of, and to develop an implementation plan for, converting at least part of the City's fleets (8 metros) to EVs. It touches on all vehicle types including passenger sedans, motorcycles, light utility vehicles (bakkies) and heavy utility vehicles. The study focused on available subsides in South Africa and use these in the model to simulate the impact of subsides on impact of overall cost for transition to EV fleet. The study aims to contribute to cost savings to the reduction of GHG in cities, Improvement of Energy Security, and job creation because of a new sector.

- **Greening of Municipal Fleet Study**

This study sought to assess the feasibility of, and to develop an implementation plan for converting at least part of the Cities fleets to EVS (electric/hydrogen/hybrid). It touches on all vehicle types including passenger sedans, motorcycles, light utility vehicles (bakkies), city buses and heavy utility vehicles.

3.2.4.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Cleaner Mobility

Cleaner Mobility 100 % targets achieved during 2021/2022								
Outcome	**Output**	**Output Indicator**	**Audited Actual Achievement 2019/20**	**Audited Actual Achievement 2020/2021**	**Planned Annual Target 2021/2022**	**Actual Achievement 2021/2022**	**Deviation from planned target to Actual Achievement 2021/2022**	**Reasons for deviations**
Clean Municipality Fleet, Public and Private Transport System.	Cleaner mobility: greening Municipal fleet and cleaner transport massification plans.	Number of energy solutions assessed (as confirmed by (i) advisory notes, (ii) feasibility reports, (iii) complete study reports, (iv) case studies, (v) technology roadmaps, and (vi) operational demonstration facilities).	3/3	1/1	1	1		
		Annual energy industry insight (trends) publication reflecting insights from extensive International and National collaboration, interfacing and forums.	0/1	1/1	1	1		
		Number of industry roadmaps, sector development plans and industry support tools developed to promote energy related market/ industry development.	New indicator from 2021/2022		1	1		
		Number of industry knowledge sharing events and platforms hosted to promote energy related market/ industry development.	New indicator from 2021/2022		1	1		
		Number of recipients of energy related training facilitated by SANEDI.	New indicator from 2021/2022		5	11	6	The CM initially planned to conduct physical training for five recipients due to past experience with demand for the trainings. However, the training was conducted online due to Covid-19 conditions, which resulted in increased numbers and enabled the CM to accept more than the initially planned five recipients as there was no additional costs incurred.

3.2.5 Cleaner Fossil Fuel

DurDuring 2012, the South African Carbon Capture Storage (CCS) Roadmap was endorsed by Cabinet. Recently, delays and the incorporation of capture, utilisation and mineralisation saw the phylogeny of a refreshed Roadmap. The Pilot CO_2 Storage Project and the Pilot CO_2 Capture project conflate in the integrated CCS Demonstration Project circa 2026. The consummation of the overall Carbon Capture Utilisation and Storage (CCUS) programme is anticipated during 2030.

There are changes in the Cleaner Fossil Fuel (CFF), as from 1 September 2020 the sub-programmes under CFF were transferred to the Council for Geoscience (CGS) as per the Minister's approval. To this end, the Pilot Carbon Dioxide Storage Pilot Project (PCSP), the CCUS project, and the team have been transferred to the CGS for further implementation and custodianship. The transfer of CCUS to CGS is a logical step, as SANEDI had been working with the CGS throughout the CCS programme. The move has resulted in extra staff available to work on the programme. Moreover, it has resulted in two major revisions to the CCUS Programme:

- Since the launch of the original Atlas, the CGS has undertaken further geological analyses indicating further possible geological storage sites. Consequently, the Pilot CO_2 Storage Project has been moved from the KwaZulu-Natal (KZN) Province to the Mpumalanga Province, closer to the source of point CO_2 emissions.
- The following technologies, enhanced coal-bed methane, underground coal gasification and enhanced geothermal energy extraction, have been added to the scope of utilisation under investigation.

We believe that exploration of solutions in CFF is important, and that there is scope outside of CCUS that should be explored. Therefore, SANEDI retains the CFF sub-programme, and is exploring other applied energy research, including clean coal pilots and biofuels. Through demonstrated clean energy initiatives, SANEDI will support the Sector Education and Training Authorities (SETAs) and Incubators to enable the development of skilled Small, Medium Micro Enterprises (SMMEs) in the clean energy sector.

During 2021/22, SANEDI undertook research on Cleaner Fossil Fuels Roadmap. The research discovered feasible options for South Africa to be able to lower the CO_2 emissions in the Fossil Fuel sector moving forward. The outputs of this project include an appraisal of the current Fossil Fuel energy scenario in South Africa, addressing inter alia technical feasibility, economic feasibility, advantages, and disadvantages in mapping a move towards CFF. The study incorporates engagements with interested and affected parties and motivated recommendations for what Cleaner Fossil Fuel systems and/or demonstrations could be undertaken in South Africa through preliminary front-end designs, and business plan roadmaps. This document identifies what the most feasible options for South Africa are, to be able to lower the CO_2 emissions in the Fossil Fuel sector moving forward.

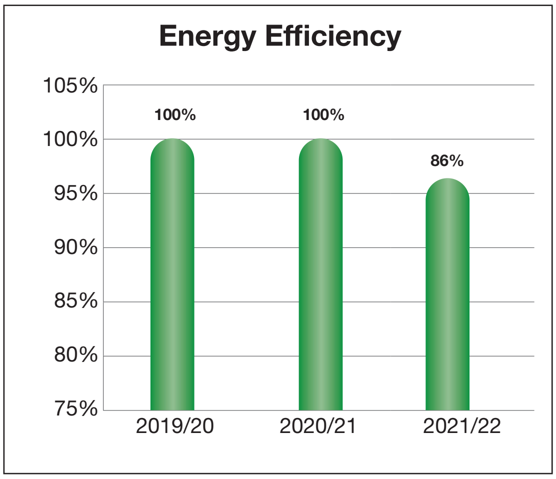
According to the main findings, the evaluation of the technology metrics and considering the relationships between them, including dependencies and prerequisites for successful project execution, has enabled the development of Fossil Fuels Technology Pathways for Reduced Greenhouse Gas Emissions. Pathways have been developed for Power Generation, Cleaner Liquid Fuels and Carbon Capture, Storage and Utilisation. These pathways form the basis of a feasible CFF Roadmap and provide options for consideration during future energy planning processes.

3.2.5.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Cleaner Fossil Fuels

Cleaner Fossil Fuels 100 % targets achieved during 2021/22								
Outcome	**Output**	**Output Indicator**	**Audited Actual Achievement 2019/20**	**Audited Actual Achievement 2020/21**	**Planned Annual Target 2021/22**	**Actual Achievement 2021/22**	**Deviation from planned target to Actual Achievement 2021/22**	**Reasons for deviations**
Demonstrated GHG emissions mitigation potential in support of National commitments.	Roadmap and Business case for CFF approved.	Number of energy solutions assessed (advisory notes, feasibility reports, complete study reports, case studies, technology roadmaps and operational demonstration facilities).	3/3	0/7	1	1		

3.3 Programme 3: Energy Efficiency



Energy Efficiency means using less energy to provide the same service. Energy Efficiency is essential to life and all living organisms. The sun, directly or indirectly, is the source of all the energy available on Earth. Our energy choices and decisions, impact Earth's natural systems in ways we may not be aware of, so it is essential that we choose our energy sources carefully. Energy Efficiency aim to accelerate a shift towards a resource and particularly, an energy (including gas, liquid fuels, electricity and water) efficient society. During 2021/2022, about 23 local empowerment opportunities were created through the Cool Roof Coating projects in Sharpeville, Cape Town and City of Tshwane. Furthermore, 6000 leaners including school staff will revere the cool roof environment in three schools in Sharpeville.

Highlights

- **Cool Roof coating in Sharpeville**

Cool Roof coating at three Sharpeville Schools were completed on all undamaged roofs scoped. Five thousand square metres of roofing were coated and approximately 500 square metres of damaged roofing were unable to be coated. The Department of Basic Education (DBE) is in the process of replacing damaged roofs. Indoor temperatures in the treated classrooms show a reduction of between 2 and 5 degrees Celsius, without the use of electricity. Approximately 6000 staff and learners benefited from this intervention. "Cool Roofing entails a relatively simple, passive, EE measure in the form of a paint which emits and reflects heat and light away from a building to which it is applied. This means that the electricity required for either heating or cooling a building is dramatically reduced, thus saving on costs and GHG emissions, and ultimately having an added benefit of decreased equipment or hardware maintenance."

- **Memorandum of Agreement (MoA) with Thermal Insulation Products & Systems Association SA (TIPSASA)**

The MoA was signed between TIPSASA and SANEDI to establish a Cool Surfaces product performance testing Laboratory and will be housed in the newly established South African Energy Efficiency Hub (Omega Test House) in Midrand. The Omega Test House tests the product performance of a range of EE building materials against the South African National Standard (SANS).

The Cool Surfaces Lab is due to open shortly, and as this is the only CS Lab in the Southern Hemisphere, it will benefit not only South Africa, but will also serve the Southern African Development Community (SADC) region. The price of testing Cool Surfaces products in international laboratories (India, USA, Australia and Europe) is currently exorbitant (up to half a million rand) and is a significant barrier to increasing certified South African Cool Surfaces manufacturing, especially for SMEs. The SANEDI Cool Surfaces Lab will significantly reduce this cost by at least 50%.

Furthermore, SANEDI and TIPSASA collaborated to install insulation in 20 houses at the Masonwabe informal settlement. The study will become available in Quarter 3 and seeks to prove the claim that Insulation works together with the reflective cool surfaces to keep the indoor temperature of these structures comfortable throughout the year (warm in winter and cool in summer). As a result, 16 locals received skills training in Cool Surfaces application and insulation installation. As a result of these interventions, these 20 structures are now both heat and cold resilient, not just cooled. The data is to serve as justification for policy inclusion of both technologies for energy passive interventions in the National built environment.

- **Memorandum of Agreement (MoA) between SANEDI and City of Cape Town**

The MoA with the City of Cape Town allows for the creation of local entrepreneurs by distributing cool reflective coatings via satellite shops, and the establishment of a mini factory in Masiphumelele. The City is assisting with compliance of nearby property/land zoned for business use. These reflective, fire retardant, waterproof coatings are usually not available in isolated informal settlements, where transporting the specialised paint can be an additional and expensive burden. Three locals (youth) were identified by the City of Cape Town and received entrepreneurial skills to enable them to open a small business in their location. There are also opportunities for 10 potential jobs with great potential for exponential growth.

- **Standards and Labelling**

SANEDI through its project on S&L has partnered with Collaborative Labelling and Appliance Standards Program (CLASP) in conducting a study titled "In-depth Assessment of Water Efficiency Opportunities in South Africa". CLASP is a Non-Governmental Organization (NGO) that focuses on appliance and equipment energy performance and quality, to mitigate and adapt to climate change and expand access to clean energy.

The report revealed that standards for taps and showerheads, could address the country's linked water and energy crises by reducing the use of water and electricity needed to heat some of that water. The report seeks to advance water, and in turn, EE in South Africa by making recommendations for alignment to international standards which have improved efficiency globally. The report also encourages a flow follows function, approaching the labelling and standardization of taps and installations.

3.3.1 Outcomes, Outputs, Output Indicators, Targets and Actual Achievement

Energy Efficiency

Energy Efficiency 86 % targets achieved during 2021/2022								
Outcome	**Output**	**Output Indicator**	**Audited Actual Achievement 2019/20**	**Audited Actual Achievement 2020/2021**	**Planned Annual Target 2021/2022**	**Actual Achievement 2021/2022**	**Deviation from planned target to Actual Achievement 2021/2022**	**Reasons for deviations**
Demonstrated GHG emissions mitigation potential in support of National commitments.	Processed 12L tax applications.	Number of EE solutions implemented.	56/56	2/2	15	39	24	The deviations were demand driven. The initial targets were realistic given the conditions at the time i.e., constant lockdowns and Industry being closed or not operating at full capacity due to Covid-19. However, when the economy opened partially, we experienced a significant and unexpected increase in the number of applications received and processed.
		GHG emissions reduced (tonnes CO2).	New indicator from 2021/2022		1,5 tonnes	194 tonnes	192,5 tonnes	
	Smart public facilities (and any other SANEDI driven initiatives contributing towards GHG reduction.).	Number of EE solutions assessed.	1/1	1/1	2	2		
	Cool Roof coatings (schools, low-cost housing, DoD).	Area coated (m^2) and GHG emissions reduced (tonnes CO_2).	New indicator from 2021/2022		1 000 000 m^2	134 900 m^2	865 100 m^2	The target could not be achieved, due to inability to access sites during different lockdown levels, delays in Municipal collaboration activities, such as community engagements and sourcing local labour as well as delayed external approvals for funds.
Evidence based planning, resource allocation and decision-making enabled by accurate and timely information, datasets and data analytics.	EE data sets and information for policy decision making.	Number of EE energy-related datasets maintained per annum.	6/6	6/6	2	2		
	Register of EPCs for commercial buildings.	Number of EE performance certificates issued.	New indicator from 2021/2022		4	24	20	The deviations were demand driven. More request for certificates emerged, as awareness was created around the limited deadline for compliance.
	EPC database developed.	Functional database.	New indicator from 2021/2022		1	1		

PART C: GOVERNANCE

1. INTRODUCTION

SANEDI is a juristic entity established by section 7(a) of the National Energy Act (NEA), Act 38 of 2008, and is managed and controlled by a Board, which: -

- Must determine the South African National Energy Development Institute's policies and procedures.
- Must exercise control over the performance of the South African National Energy Development Institute's functions; and
- Has the same powers and authority as are conferred upon the South African National Energy Development Institute in terms of this Act.

2. PORTFOLIO COMMITTEES

During the 2021/22 financial year, SANEDI met with the Parliamentary Portfolio Committee (PPC) to present its Annual Performance Plan(APP) for the year 2021/22, as well as to present the Annual Report (AR) for the year ended 31 March 2020/21. There were no material issues of concern that were raised by the Committee.

3. EXECUTIVE AUTHORITY

The Executive Authority (EA) of SANEDI is the Minister of Mineral Resources and Energy (previously DoE). As per the compliance requirements, SANEDI submitted the following reports to the EA on the below indicated dates:

REPORT	DATE OF SUBMISSION
First Quarter performance report for the period 1 April 2021 to 30 June 2021	30 July 2021
Annual Report(AR) for 2020/21	31 August 2021
First draft Annual Performance Plan(APP) for 2022/23	29 October 2021
Second Quarter Performance Report for the period 1 July to 30 September 2021	29 October 2021
Third Quarter Performance Report for the period 1 October to 31 December 2021	29 January 2022
Final draft APP for 2022/23	28 February 2022. The due date was 31 January 2022, an extension was sought and granted to submit late because the new Board started in January 2022. The Board had to be allowed opportunity to provide leadership on APP.
Fourth Quarter Performance Report for the period 1 January to 31 March 2022	29 April 2022

4. THE ACCOUNTING AUTHORITY / BOARD

The role of the Board

- Formulating, approving and monitoring the strategy, goals, business plans and annual budgets, and approving any subsequent material changes in strategic direction or material deviations in business plans.
- Approving the Annual Financial Statements(AFS), ensuring these fairly present the financial and non-financial position, contain proper disclosures and conform to the law.
- Ensuring that an adequate and effective process of Corporate Governance is established and maintained and that King IV principles are applied or, alternatively, where the requirements of King IV are not applied, indicating the reason and explaining other processes implemented by the Institute to address aspects of the requirement.

Board Charter

The Board operates in terms of an adopted Charter. The Charter was reviewed against the backdrop of the recommended practices on Board Charters published by the Institute of Directors Southern Africa.The Charter confirms, as recommended by the King IV Report on Corporate Governance, and stipulated in the Energy Act inter alia, that the Board's duty is:

a) To steer and set strategic direction regarding both the organisation strategy, and the way in which specific areas are to be approached, addressed, and conducted,
b) Approve policies and planning that give to the strategy,
c) Oversees and monitor the implementation and execution of policies by Management, and
d) Ensure accountability by means of reporting and disclosures.

Composition of the Board

The Board is appointed by the Minister of Mineral Resources and Energy (previously DoE) in consultation with the Minister of Science and Innovation (previously DST). Section 8(2) of the Energy Act requires the following Board composition:

- Chairperson,
- Deputy Chairperson, and
- Representatives from the following Government Departments:
  - Mineral Resources and Energy (previously DoE),
  - Trade and Industry,
  - Science and Technology,
  - Environmental Affairs, and
  - Transport.
- And two other suitably qualified persons.

The Board was appointed in January 2022 and consisted of the following members:

Name and Surname	Qualifications	Date appointed	Number of meetings held	Number of meetings attended
Mr Sicelo Xulu (Chairperson)	Master of Philosophy (Mphil) Electrical & Electronics Engineering (Cum Laude), BSc (Hons) Applied Sciences: Electrotechnics	11 January 2022	2	2
Ms Lungile Mtiya (Deputy Chairperson)	MPhil – Labour Law & Employment Relations B Comm. Hons- Employment Relations & Labour Law, B-Tech Degree Human Resources	11 January 2022	2	2
Ms Abegail Boikhutso CA(SA)	Chartered Financial Analyst (CFA) Candidate, B. Com Accounting MBA	11 January 2022	2	2
Ms Tumelo Mashabela	BSc Electrical Engineering and LLB, Bachelor of Law	11 January 2022	2	2
Mr Mthokozisi Mpofu** Ms Noma Qase (alternate member for Mr Mthokozisi Mpofu)**	Master of Philosophy, Energy Studies, Bachelor of Social Science (Honours)	11 January 2022	2	2
Ms Ilze Baron** Mr Gerard Fourie (alternate member for Ms Ilze Baron) **	BCom Economics BCom Economics, MBA	11 January 2022	2	2
Mr Jongikhaya Witi** Ms Olga Chauke (alternate member for Mr Jongikhaya Witi) **	MTech Degree in Chemical Engineering, BTech Degree in Chemical Engineering, MSc in Mechanical Engineering (Energy Studies). BCom Philosophy in Sustainable Development Planning and Management, Honours Degree in Geography, Bachelors Degree in Geography	11 January 2022	2	2

Board Vacancies

Representatives from the Department of Science and Innovation (DSI) and of the Department of Transport (DoT) are yet to be appointed by the Minister.

Board Committees

The Audit and Risk Committee (ARC) was established in 2021 by Management after an extended period of the entity not having a Board to provide assurance to both the Interim Chief Executive Officer (ICEO), and EA and in order for the entity to comply with the requirement of the Public Finance Management Act (PFMA) and Treasury Regulation 3.1.13.

The membership of this Committee was subsequently ratified by the Board after their appointments in January 2022.

Name of members	Internal or external	Date appointed	No. of meetings held	No. of meetings Attended
Ms Masaccha Khulekelwe Mbonambi (Chairperson)	External	29 October 2021	2	2
Ms Yongama Pamla	External	29 October 2021	2	2
Mr Mahlatsi Movundlela	External	29 October 2021	2	2

***Subsequent to the financial year, the Board appointed two additional Board members to the Committee. (Ms Abegail Boikhutso and Ms Tumelo Mashabela)**

Remuneration of Board members

The Independent Board members, and members of its sub-committee are remunerated per meeting attended using rates as approved annually by the Minister of Energy. Those that are currently in the employ of the State, and representative of various Ministries on the SANEDI Board are not remunerated.

Board members and members of its sub-committees are re-imbursed for expenses incurred in carrying out they duties and responsibilities in line with SANEDI policies for expenses such as travel.

No other allowances are paid to the Board members.

Board remuneration

Name	Remuneration	Other allowance	Other re-imbursements	Total
Mr Sicelo Xulu	R47 070	R 5 929	-	R52 998
Ms Lungile Mtiya	R 40 005	R 2 223	-	R42 227
Ms Abegail Boikhutso	R 34 992	R 972	-	R 35 964
Ms Tumelo Mashabela	R 31 104	R 972	-	R32 076
Ms Ilze Baron**	-	-	-	-
Mr Gerard Fourie (alternate member for Ms Ilze Baron) **	-	-	-	-
Mr Jongikhaya Witi**	-	-	-	-
Ms Olga Chauke (alternate member for Mr Jongikhaya Witi)**	-	-	-	-
Mr Mthokozisi Mpofu**	-	-	-	
Ms Noma Qase (alternate member for Mr Mthokozisi Mpofu)**	-	-	-	-
Total	**R 153 171**	**R 10 096**	**-**	**R 163 266**

****Employee of the State. Not remunerated.**

Audit and Risk Committee remuneration

Name	Remuneration	Other allowance	Other re-imbursements	Total
Ms Masaccha Khulekelwe Mbonambi (Chairperson)	R 56 121	R 3 238	-	R 59 358
Ms Yongama Pamla	R 20 952	-	-	R 20 952
Mr Mahlatsi Movundlela	R 15 714	-	-	R 15 714
Total	**R 92 787**	**R 3 238**	**-**	**R 96 024**

5. RISK MANAGEMENT

Risk Management is a strategic imperative, rather than an option for high performing organisations. SANEDI, is a Schedule 3A public entity under the PFMA, Act 1 of 1999, and should have sound Governance structures that adhere to the requirements of the PFMA. SANEDI is committed to a process of Enterprise-Wide Risk Management that is aligned to the principles of good Corporate Governance as outlined in the King III report, as supported by the PFMA. The Risk Management Policy was reviewed and approved in 2020 by the previous Board and such policy informs the 2021/22 Risk Register.

There is a Risk Management policy and strategy. The board assigned Audit Risk Committee (ARC) with the oversight responsibilities of organisation-wide Risk Management. Strategic Risks are managed through Risk Register that is endorsed by the ARC and the board. We are satisfied that significant risks have been managed to an acceptable level.

6. INTERNAL CONTROL UNIT

The Effectiveness of Internal Control

During the period under review, various reports of the Internal Auditor, as well as the External Auditor's report on the AFS and Management Letter of the AGSA, indicated that the entity's system of internal control has shortcomings. The Committee has noted these, and based on the outcome of such reviews, and the information provided by Management, the Committee is of the opinion that the internal controls of the entity were effective throughout the year under review, despite the highlighted control weaknesses. The Committee reviewed the activities of the Internal Audit function and has concluded the following:

- The Internal Audit function is effective, with no unjustified restrictions or limitations, and
- The Internal Audit reports were reviewed at quarterly meetings, including its annual work programme, co-ordination with the External Auditors, the reports of significant investigations and the responses of Management to issues raised therein.

Our review of the findings of the Internal Audit work, which was based on the risk assessments conducted in the public entity revealed certain weaknesses, which were then raised with the public entity. The following Internal Audit work was completed during the year under review:

- IT Security,
- Supply Chain Management (SCM) processes,
- Follow up Reports,
- Performance Information Quarter 1-3, 2021/22,
- Management accounts Review Quarter 1-3 2021/22, and
- Review of the APP.

7. INTERNAL AUDIT AND AUDIT COMMITTEES

7.1 INTERNAL AUDIT

Internal Audit is an independent provider of assurance and advisory service. Nexia SAB&T, an outsourced firm responsible for SANEDI's Internal Audit function, provides an independent appraisal function that is designed to examine and evaluate SANEDI's internal controls. The main objective of the entity's Internal Audit is to assist the Board and Executive Committee with the effective discharge of their responsibilities by evaluating the adequacy and effectiveness of Risk Management, the control environment and Governance processes. In executing its Board-assigned mandate, the Internal Audit follows a risk-based audit methodology in compliance with the Institute of Internal Auditors(IIA) and the International Standards for the Professional Practice of Internal Auditing. Any major weaknesses detected are brought to the attention of the Audit and Risk Committee (ARC), the external auditors and members of Management for their consideration and remedial action.

7.2 AUDIT COMMITTEES

The Audit Committee is constituted as a Board sub-committee with responsibilities as delegated by the Board in terms of Section 51 (1) (ii) of the PFMA and Treasury Regulations 27.1.1. The Audit Committee has an independent role with accountability to both the Board and Shareholder. The role of the Audit Committee is to provide independent assurance and assistance to the Board on Control, Governance and Risk Management.

The Audit Committee does not replace established Management responsibilities and delegations. The key activities of SANEDI ARC, in correspondence with National Treasury (NT) Regulations, are:

- To review the adequacy of policies, procedures, and the internal control systems, including information technology security and control, and financial controls,
- To review performance management systems and information for compliance and alignment to company purpose, objectives and commitments,
- To review and approve the scope of activities of the Internal Audit function, ensuring that it covers the key risks and that there is alignment with the external auditor (Auditor-General of South Africa (AGSA)), assess the effectiveness of the Internal Audit function,
- To review the AGSA's audit scope, approach and performance, and review findings and implementation of recommendations by Management,
- To review legal and regulatory compliance and effectiveness of systems for monitoring such,
- To report to relevant Stakeholders, including the Board regarding the Committee activities, issues, and related recommendations, and
- To report concerns to the Executive Authority where relevant.

8. COMPLIANCE WITH LAWS AND REGULATIONS

SANEDI reports on compliance with the PFMA and Treasury Regulations in its Quarterly reports submitted to the DMRE and National Treasury. Through the Chief Financial Officer (CFO) Forum, NT provides a support structure to CFOs of public entities. This interface allows regular engagement with NT that facilitates information sharing, provides training workshops for finance personnel and CFOs, and provides updates on recent developments within NT, the Accounting Standards Board (ASB) and financial Legislation and Regulations.

All policies and procedures approved by the SANEDI Board are maintained in a register of policies and procedures and are complied with. The Secretariat assists with compliance matters and ensures that the company's affairs, as well as the Board proceedings, are properly carried out in accordance with the relevant laws and standards. The Department of Mineral Resources and Energy (DMRE) furthermore issues an annual compliance calendar to which SANEDI adheres.

9. FRAUD AND CORRUPTION

SANEDI is committed to the eradication of fraud, corruption, misconduct and any irregularities, and takes a zero-tolerance position towards fraud. A Board approved Fraud Prevention Plan was adopted, with measures to address Fraud Risk Management from both a proactive and reactive perspective.

SANEDI has contracted the services of an independent hotline service provider, for the confidential reporting of fraud, corruption, misuse of public resources and other inappropriate behaviour. No calls were received by the Fraud Hotline during the 2021/22 financial year.

10. MINIMISING CONFLICT OF INTEREST

In accordance with the provisions of the Companies Act and the PFMA, all Board members and members of the Executive team, declare financial interests annually, and the declarations of financial interests are submitted to the DMRE. Further interests are declared at each meeting of the Board or its Committees, and declaration of interest is implemented in line with the PFMA requirements.

An annual declaration of interest is signed by all staff members, including those working in Supply Chain Management (SCM). A record of these declarations is maintained by the Human Resources (HR) Department. Every staff member employed in SCM has furthermore signed the NT code of conduct for supply chain practitioners. All individuals who are involved in the bidding process (including all supply chain related, evaluation and adjudication meetings) declare their interest prior to proceeding with the process, as required by the PFMA. Any individual who is a member of the Bid Evaluation Committee (BEC), is not allowed to adjudicate on the same bid if they happen to be a member of the Bid Adjudication Committee (BAC).

11. CODE OF CONDUCT

SANEDI adopted a Code of Conduct in July 2015 which was revised and approved by the Board in April 2018. In March 2022, the code was reviewed by HR and endorsed by employees. The Code is universally applicable to all employees and contractors of the organisation, and requires a commitment by every employee to adhere to the Code. The Code serves as a guide to assist the Board, Executive Management, Staff and Contractors of the organisation, in making ethical decisions, and engaging in appropriate and lawful conduct. Should there be a breach of the Code of Conduct, a disciplinary process will be followed. No such breach was reported during the year.

12. HEALTH SAFETY AND ENVIRONMENTAL ISSUES

SANEDI endeavours to put the health and safety of its employees and their work environment, including all other persons conducting business on its premises, first as far as is reasonably possible. To this end, SANEDI is committed to the fulfilment of the requirements stipulated in the Occupational Health and Safety Act (OHSA), 1993 (Act No. 85 of 1993). SANEDI has developed a Health and Safety Policy, and subsequently established a Health and Safety Committee, to ensure that all who are in SANEDI's work facilities are in an environment that has eliminated, or reduced potential health and safety threats.

13. COMPANY SECRETARY

The Board is assisted by a Company Secretary responsible for the secretariat function, Governance advisory services. The Board and members of the Executive Committee have access to the Company Secretary for guidance on how to perform their duties and responsibilities. The Company Secretary is responsible for the ongoing training of Board members, and the scheduling, preparation and administration of Board and Committee meetings.

14. AUDIT COMMITTEE REPORT

We are pleased to present our report for the financial year ended 31 March 2022.

AUDIT AND RISK COMMITTEE RESPONSIBILITY

The Audit and Risk Committee(the Committee) is a formally constituted sub-committee of the board. The Committee reports that it has complied with its responsibilities arising from Section 51 (1)(a)(ii) of the Public Finance Management Act (as amended) and Treasury Regulation 27.1. The Audit Committee also reports that it has adopted formal terms of reference that the board has approved. The Committee has executed its duties during the past financial year in compliance with these terms of reference and has discharged all its responsibilities.

AUDIT AND RISK COMMITTEE COMPOSITION

The Committee is comprised of three (3) non-executive members (independent) and two (2) members of SANEDI Board. The Committee comprises persons with a blend of skills, knowledge, and experience necessary to discharge its responsibilities fully. On 31 March 2022, the Committee comprised of the following members:

1) Ms Masaccha Khulekelwe Mbonambi (Chairperson)
2) Ms Yongama Pamla
3) Mr Mahlatse Movundlela

The Chief Executive Officer, Chief Financial Officer, the Head of Internal Audit, and the Auditor-General South Africa (AGSA) attend by invitation.

INTERNAL AUDIT

The Internal Audit function is outsourced, and it is performed by Nexia-SAB&T. The Committee is responsible for overseeing Internal Audit, and the Committee is satisfied with the competence of the Internal Audit function. The Committee approved the Internal Audit plan, and the Committee is satisfied that the coverage and execution by Internal Auditors was in line with the approved plan. The following are some Internal Audit projects completed during the year under review:

- Quarterly Performance Information Reviews
- Financial Control Review
- Supply Chain Management Review
- Review of the 2021/22 Annual Performance Report
- Review of the Annual Financial Statements.

Furthermore, the Committee encourages the Executive Management, the AGSA and the Internal Audit Function to cooperate and strengthen consultation to achieve effective combined assurance at the entity.

EFFECTIVENESS OF INTERNAL CONTROL

Based on the results of the audits performed and the follow-up reviews conducted, the overall opinion on the internal control design was adequate but, in some instances, ineffective in ensuring that the entity's objectives are achieved. There is still room for improvement by management in terms of addressing the recommendations by Internal Audit timely.

IN-YEAR MANAGEMENT AND MONTHLY/QUARTERLY REPORT

The Committee noted the content and quality of financial and non-financial quarterly reports prepared and submitted by the Accounting Officer of the entity during the year under review and confirms that certain reports were not in compliance with the statutory reporting framework. Certain improvements were proposed and accepted by management and have been implemented.

EVALUATION OF THE FINANCIAL STATEMENTS AND ANNUAL PERFORMANCE REPORT

The Committee has:

- reviewed and discussed the unaudited and audited Annual Financial Statements and Annual Performance Report included in the Annual Report,
- reviewed changes relating to the Annual Financial Statements and Annual Performance Report,
- reviewed the entity's compliance with legal and regulatory provisions, and
- reviewed the Auditor-General of South Africa's (AGSA) Management Report and Management's response to it.

EXTERNAL AUDITORS

The 2021/22 audit was conducted by the AGSA. In consultation with Management, the Committee agreed to the engagement letter, audit plan and fees for the financial year ended 31 March 2022. The Committee was satisfied with the independence and objectivity of the AGSA and has met with external auditors to ensure that there were no unresolved issues. The Committee accepts the audit opinion and conclusion expressed by the AGSA on the Annual Financial Statements and the Annual Performance Report.

On behalf of the Audit and Risk Committee.

Ms Masaccha Khulekelwe Mbonambi
Chairperson of the Audit and Risk Committee (ARC)

15. B-BBEE COMPLIANCE PERFORMANCE INFORMATION

Has the Department / Public Entity applied any relevant Code of Good Practice (B-BBEE Certificate Levels 1 – 8) with regards to the following:		
Criteria	**Response Yes / No**	**Comments**
Determining qualification criteria for the issuing of licences, concessions or other authorisations in respect of economic activity in terms of any law?	N/A	SANEDI does not issue any licenses to the companies. However, SANEDI played a role in assisting companies to obtain tax certificates and receive tax relief from SARS.
Developing and implementing a preferential procurement policy?	Yes	There is a procurement policy in place that takes into consideration B-BBEE compliance.
Determining qualification criteria for the sale of State-owned Enterprises(SoEs)?	N/A	SANEDI does not have any subsidiaries.
Developing criteria for entering into partnerships with the private sector?	Yes	Through procurement contracts and collaboration agreements Treasury Regulations are complied with when goods or services are procured through Public Private Partnerships or as part of Public Private Partnerships.
Determining criteria for the awarding of incentives, grants and investment schemes in support of Broad Based Black Economic Empowerment(B-BBEE)?	N/A	SANEDI does not give incentives, grants and investment schemes in support of B-BBEE.

16. STAKEHOLDER ENGAGEMENT

16.1 Introduction and perspective

The Stakeholder Engagement focus is placed on building strong, constructive, interpersonal relationships with key Stakeholders, particularly the shareholder, the DMRE. SANEDI recognises the strategic importance of its Stakeholders and partners in fulfilling its mandate. These include matters of policy, funding, programme development and implementation, and research collaboration.

The emphasis of the Stakeholder Engagement Strategy is on improving the quality and frequency of interactions with Stakeholders, to create a supportive, collaborative environment within which SANEDI can fulfil its mandate and achieve its strategic priorities. There is an engagement plan for each Stakeholder, and an automated reporting and tracking tool was introduced in the 2021/ 22 financial year.

The Strategy and reporting system is based on the International AA1000 Stakeholder Engagement Standard. The outputs are fully congruent with the Global Reporting Initiative (GRI) G4 Guidelines and International Integrated Reporting Council (IIRC) reporting requirements.

The GRI guidelines assist in providing a holistic framework that addresses broad performance and reporting. It is against this backdrop that SANEDI adheres to sustainability reporting, to mitigate negative environmental, social and Governance impacts, thereby improving SANEDI's reputation as well as to enable external Stakeholders to understand SANEDI's vision, mission and values. The boundaries of Stakeholder Engagement are defined by the scope and context of the SANEDI Strategy and its mandate, as defined by Legislation and the remit provided by the DMRE.

As a norm, the SOEs are required to submit their entities' plans/activities to the Government Communications Information Systems (GCIS) dashboard via the DMRE's Chief Directorate on a weekly basis. SANEDI has been submitting consistently during the period under review, in accordance with the directive of the Director-General (DG).

The various portfolios have reached out to SANEDI's collaborative partners/key Stakeholders on a regular basis in an endeavour to cement the synergistic relations, with impressive results, especially amongst both the trade and mainstream media, where SANEDI are regularly approached for interviews and opinion pieces on topical issues facing the energy industry in South Africa. Due to the outbreak of the Covid-19 pandemic in 2020 that culminated in the Government to announce the disaster management that included lock down restrictions in the 2021/22 reporting period, SANEDI and its collaborative partners, were unable to participate in events that showcased its programmes as well as information-dissemination on career opportunities in the Energy Sector, to the rural communities.

Monthly reports are a pre-requisite, and the Internal Auditors continued to conduct quarterly Stakeholder Engagement audits during the period under review, to confirm that an adequate control framework is in place in certain key control activities. These were found to be adequate and effective. In accordance with the best business practices, the Monthly Reports focused on progress made/lack thereof. In a case of lack of progress, remedial steps were recommended.

16.2 Communications and Stakeholder Engagement

The Communications Department of SANEDI, through the implementation of the Communication Strategy and Stakeholder Engagement Strategy, as well as various legal frameworks, focuses on creating awareness and a positive perception of SANEDI as a brand and its services. It ensures that appropriate messages are targeted to the correct Stakeholders, building and strengthening relationships with Stakeholders, thus creating awareness about SANEDI and its activities. SANEDI's Communications team is tasked with:

- Profiling SANEDI as a dynamic and successful organisation with a practical and energetic approach,
- Creating a culture of effective communications,
- Building a team of skilled communicators within SANEDI,
- Empower project and support team members to communicate more effectively,
- Develop communications tools and materials which support and enable effective communications, such as an updated SANEDI-website and establishing a presence on all social media platforms, and
- Provide a programme of practical high-impact communications activities which is achievable within SANEDI's current limited resources.

In line with the SANEDI Stakeholder Strategy, and considering the reduced budget allocation, the key objectives of the Communications Department were to share knowledge (using all appropriate platforms to ensure a constant flow of relevant and useful content), tell the story (generate news and stories around projects and case studies, and ensure events are supported by a good flow of stories), build the brand and the brand ambassadors and collaborate by partnering with similar organisations to extend the reach of SANEDI and align messaging.

During the 2021/22 financial year, the Institute embarked on an Energy Efficiency (EE) awareness campaign to counter load shedding by providing tips on how to save electricity in the household. Other topical matters addressed by SANEDI which attracted a lot of media coverage and requests for interviews, included SANEDI's work in the area of Renewable Energy (RE) and EE with the Department of Defence (DoD) around Cool Surface and Bio-digestor installations, the successful introduction of the Regulations for the Mandatory Display of Energy Performance Certificates (EPCs) buildings, SANEDI's collaboration with the World Bank (WB) on researching sustainable financing mechanisms for EE and RE in specific priority areas of the South African market, as well as the development of a robust market for Energy Service Companies (ESCo's) in South Africa. SANEDI's collaboration work with the DSI, Anglo American and other partners also received, and continues to receive prime media coverage, both locally and internationally.

16.3 Events

SANEDI recognises events including industry conferences, seminars and workshops, are an opportunity to communicate directly with key audiences, to share information, and to build relationships. The success of events as a communication tool is determined by prioritisation and identification of the most appropriate events, good preparation and training, and the availability of dynamic communication materials. This, however, was not possible during the current reporting year due to the lock down and restrictions by Government to avoid the spread of the Covid-19 pandemic. Efforts and focus were made and changed to participate in a variety of virtual events during the reporting period. In August 2021, SANEDI held a very successful Women in Energy webinar under the theme "Women Leadership in Energy" to celebrate Women's Month. The goal of the webinar was to create awareness among women and youth about career path opportunities in energy, leadership, and entrepreneurship. The Institute also hosted a very successful webinar to launch a Residential Electricity Consumption Research Study together, with the University of Cape Town (UCT). Various other events and conferences such as African Utility Week, the Manufacturing Indaba and an International online Cool Surfaces conference were participated in, where SANEDI experts presented SANEDI projects.

Furthermore, an annual SANEDI Energy Insights was published in March 2022, providing valuable insights on a variety of topical energy industry matters facing the country. SANEDI also tracks all media coverage daily, and reports on this on a monthly and quarterly basis, confirming that SANEDI continues to receive widespread and positive media coverage, with the last quarter of the financial year being the best with a staggering value of more than R 20 million.

Stakeholder engagement is vital to the success of SANEDI projects and other activities, and the institute values these relationships highly. SANEDI believes that through engagement with its Stakeholders, the institute will forge genuine relationships characterised by trust, mutual understanding, and cooperation. We further believe that better relationships lead to better outcomes and enhances the credibility of the Institute. Active engagement and communicating directly with our Stakeholders allow us to understand not only their perspective, but also provide new insights on different issues, provide an opportunity to make informed decisions and therefore improve chances of finishing projects on time and on par with budget. It also assists us to identify potential risks before they become threats to our projects and in the end, improve accountability.

During the year in review, SANEDI attracted and engaged various Stakeholders, both locally and internationally. Of significant importance and to confirm SANEDI's success in this area, is the recognition of peers in the industry, through the awarding of SANEDI with the International Association of Energy Engineers (AEE) with their Sub-Saharan Africa Region Institutional Energy Management Award for 2021 and Ms Lethabo Manamela, the interim Chief Executive Officer (ICEO) being awarded the South African National Energy Association (SANEA) 'Shape-shifter Award for 2021'.

PART D: HUMAN RESOURCE MANAGEMENT

1. INTRODUCTION

The Human Resources (HR) team offers strategic support to the core business of SANEDI, by assisting line-management to implement operational excellence and develop human capital capabilities and potential. The main purpose of the HR division is to partner with the organisation to foster a conducive environment for high performance This is done through organisational design/ re-design, recruitment and selection, compensation and benefits, talent management and performance management. All these dimensions were enhanced during this financial year, with the restructuring process as the central theme. The purpose of the organisational review is to increase the required capabilities to deliver on the SANEDI mandate and strategy, enable strategy execution through an appropriate and effective structure.

During the year under review, information sessions were held to provide and guide staff on the processes which will enable them to make informed decisions regarding their rights as employees, their benefit options as well as on the HR policies and procedures.

The Workplace Skills Plan (WSP) for the 2021/22 financial year was submitted to the Energy and Water Sector Education and Training Authority (EWSETA). SANEDI actively identified new areas for organisational learning such as Supply Chain Management (SCM), Contract Management, Project Management and Finance Management training. In the financial year under review, we had planned training of 80% staff, and a total of 86% training was achieved to date, and this percentage includes Development and Training, local and international training as well as the webinars.

The National Education, Health and Allied Workers Union (NEHAWU) is the only union recognised by SANEDI, with 15% of the bargaining unit members comprised of employees but not active. The Employment Equity Plan (EEP) for the period under review, was captured correctly and submitted on time to the Department of Labour (DoL). The plan included appointments of one or more employees other than African and one other employee living with disability. One Indian male was appointed in the year under review, meaning that the target is above 97% of the Employment Equity target met.

1.1 HR Priorities for 2021/22

During the financial year, SANEDI finalised the organisational review process that was embarked on the previous year to ensure that the organisation is optimally structured to deliver on its mandate. This process was completed during the course of the year under review, with support functions, employees' contracts being converted from fixed term to permanent contracts. For employees working on projects, their contracts were extended in line with project lifespan. In recognition of the employee's contribution and exceptional effort, employees were paid the performance bonuses in line with the approved incentive policy. As an employer of choice, SANEDI seeks to maintain its high-performance culture and continue to recognise and reward excellence of its staff members.

1.2 Workforce Planning Framework

For the past 3 years, two interns were appointed to embark on SANEDI's internship programme which were both absorbed into the organisation as a measure of fulfilling the skills pipeline. As per the previous Board instructions, two clerks were appointed to assist with both manual and electronic filing, since the intern intake had reduced for the year under review, the two clerks' skills were temporarily absorbed and utilized in both the HR and the Legal Department. The two clerks are also being given an opportunity to develop their skills and assisted in the reduction of the unemployment rate in South Africa.

1.3 Employee Wellness Programme

Strengthening the employer-employee relationship is an important goal for the HR Department. The effects of the National lockdown due to Covid-19 necessitated that an employee wellness programme that would attend to the well-being be sought, as the previous service provider's contract had terminated. Weekly, Information newsletters that address different health topics are being shared with all employees. There have been several employees that have used the service of the service provider and positive feedback has been provided to the employer. The service provider holds virtual induction information sessions with employees quarterly to familiarise them with different health challenges and how to overcome those.

1.4 Policy Development

In the last financial year 2021/22, ten HR policies and procedures were reviewed to ensure alignment of its HR policies to relevant Legislation and its operational requirements and are awaiting Board approval.

These policies were prioritised as these addressed pertinent issues on the current and future employee rewards structure, as well as what constitutes acceptable behaviour by employees. Employees were also educated on how utilising policies and procedures during decision-making ensures that SANEDI is consistent in its decisions. An information session was held to reiterate the importance of employees Conduct at work, and how to assist Management in managing their performance and that of SANEDI.

1.5 Challenges faced by SANEDI

SANEDI has suffered loss of a highly skilled employee in the Applied Energy division, and this loss proved that SANEDI's technical skills pipeline needs to be attended to. As a result, vigorous exercises were performed to put in place a succession plan which is yet to be approved. Another challenge that SANEDI is faced with was regarding the attraction and retention of highly needed skills through either potential employee refusing to accept employment offers, and employees resigning for greener pastures. The main reason for leaving the organisation was that SANEDI salaries and benefits were not market related. Management working with the Board is in the process of resolving this matter to ensure that the organisation retains and attracts the required technical skills.

1.6 Future HR Plans and Goals

The following high-level HR priorities will be embarked on to create a platform for SANEDI to achieve its strategic objectives:

- An updated HR strategy that will support the implementation of the organisational strategy for the new MTSF period,
- Implementation of career ladders and improvement in the succession plans,
- Developing and rolling out talent management programmes for identification of the key gaps between the talent in place, and the talent required to drive organisation success,
- Developing and implementing programmes to ensure a performance management culture is fully embedded within the organisation, and
- Developing highly skilled people.

2. HUMAN RESOURCE OVERSIGHT STATISTICS

2.1 Personnel related expenditure

Programme	Total Expenditure for the entity (R'000)	Personnel Expenditure (R'000)	Personnel exp. as a % of total exp. (R'000)	No. of employees	Average personnel cost per employee (R'000)
Programme 1: Administration	15 030	12 124	45.60%	26	578
Programme 2: Applied Energy Research, Development and Innovation	8 788	5 790	26.67%	16	549
Programme 3: Energy Efficiency	9 144	7 559	27.74%	13	703
TOTAL	**32 962**	**27 290**	**100%**	**55**	**599**

2.2 Personnel cost by salary band

Level	Personnel Expenditure (R'000)	% of personnel exp. to total personnel cost (R'000)	No. of employees	Average personnel cost per employee (R'000)
Top Management	3 562	10.81%	4	890
Senior Management	4 014	12.17%	5	802
Professional qualified	11 444	34.72%	17	673
Skilled and Unskilled	13 942	42.30%	29	4 281
TOTAL	**32 962**	**100%**	**55**	**599**

2.3 Performance Rewards

Programme	Performance rewards	Personnel Expenditure (R'000)	% of performance rewards to total personnel cost (R'000)
Top Management	1 008	3 977	25.34%
Senior Management	1 646	4 477	36.76%
Professional qualified	1 125	12 774	8.81%
Skilled and Unskilled	814	15 564	5.23%
TOTAL	**4 593**	**36 792**	**12.48%**

2.4 Training Costs

Programme	Personnel Expenditure (R'000)	Training Expenditure (R'000)	Training Expenditure as a % of Personnel Cost	No. of employees trained	Average training cost per employee
Programme 1: Administration	12 139	209	36%	75	2.78%
Programme 2: Applied Energy Research, Development and Innovation	5 599	-	0%	0	0%
Programme 3: Energy Efficiency	7 735	0	0%	0	0%
TOTAL	**25 473**	**209**	**36%**	**75**	**2.78%**

Number of employees trained is more than the number of employees in the organisation, could mean that either an employee may have attended more than one course as per the Energy and Water Sector Education and Training Authority (EWSETA), or the employees that have left the organisation also attended courses during their tenure.

2.5 Employment changes

Turnover rates provide an indication of trends in the employment profile of the public entity. CEO and Junior Accountant positions were yet to be filled, but there were many resignations in the period under review.

Salary Band	Employment at beginning of period	Appointments	Terminations	Employment at end of the period
Top Management	2	1	-	2
Senior Management	2	-	1	1
Professional qualified	11	4	3	12
Skilled and semi-skilled	26	9	3	33
Total	**41**	**14**	**7**	**48**

The figures above indicate employee movements, appointments (replacements and new appointments) and resignations, thus the numbers will not necessarily balance.

2.6 Reasons for staff leaving

Six staff members left SANEDI during the year. As reflected in the following breakdown of reasons for staff members leaving, five employees resigned, one due to death and one contract expired.

Reason	Number	% of total no. of staff leaving
Death	1	2%
Resignation	5	10%
Expiry of contract	1	2%
Total	**7**	**13%**

2.7 Employee average tenure

SANEDI 's average tenure per employee groups, the numbers do not include temporary positions employed for less than 1 year.

Salary Band	Number of employees in the band	Total years per employee band	Average tenure in years
Top Management	1	7	7
Senior Management	2	27	14
Professional qualified	11	61	5.54
Skilled and semi-skilled	26	184	7.07
Total	**40**	**279**	**6.97**

The total number of years for all employees, is an indication that although SANEDI experienced a high turnover for the 2021/22 FY, the average tenure of SANEDI is 6.97 years.

2.8 Labour Relations: Misconduct and disciplinary action

Nature of disciplinary Action	Number
Verbal Warning	None
Written Warning	None
Final Written warning	None
Dismissal	None
CCMA	1
Labour Court	1

As of 31 March 2022, there was one case referred to the CCMA and withdrawn, only one case of equal pay for equal work value still pending at the Labor Court, SANEDI is awaiting the review/court date.

2.9 Equity Target and Employment Equity Status

Levels	MALE							
	African		Coloured		Indian		White	
	Current	Target	Current	Target	Current	Target	Current	Target
Top Management	-	-	-	-	1	-	-	-
Senior Management	0	-	-	-	1	-	1	-
Professional qualified	6	-	1	-	1	-	1	-
Skilled	4	-	-	-	1	-	-	-
Semi-skilled	1	-	-	-	-	-	-	-
TOTAL	**11**	**-**	**1**	**-**	**4**	**-**	**2**	**-**

Levels	FEMALE							
	AFRICAN		COLOURED		INDIAN		WHITE	
	Current	Target	Current	Target	Current	Target	Current	Target
Top Management	2	-	-	-	-	-	-	-
Senior Management	-	-	-	-	-	-	-	-
Professional qualified	2	-	-	-	-	-	1	-
Skilled	18	-	1	-	1	-		-
Semi-skilled	5	-	-	-	-	-		-
TOTAL	**27**	**-**	**1**		**1**	**-**	**1**	**-**

PART E: FINANCIAL INFORMATION

Report of the auditor-general to Parliament on South African National Energy Development Institute

Report on the audit of the financial statements

Opinion

1. I have audited the financial statements of the South African National Energy Development Institute set out on pages 65 to 99 which comprise the statement of financial position as at 31 March 2022, the statement of financial performance, statement of changes in net assets, cash flow statement and the statement of comparison of budget and actual amounts for the year then ended, as well as notes to the financial statements, including a summary of significant accounting policies.

2. In my opinion, the financial statements present fairly, in all material respects, the financial position of the South African National Energy Development Institute as of 31 March 2022, and its financial performance and cash flows for the year then ended, in accordance with South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance Management Act 1 of 1999 (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the auditor-general's responsibilities for the audit of the financial statements section of my report.

4. I am independent of the public entity in accordance with the International Ethics Standards Board for Accountants' International code of ethics for professional accountants (including International Independence Standards) (IESBA code) as well as other ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA code.

5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Emphasis of matter

6. I draw attention to the matter below. My opinion is not modified in respect of this matter.

An uncertainty relating to the future outcome of exceptional litigation

7. With reference to note 23 to the financial statements, the public entity is the defendant in a labour matter case. The public entity is opposing the claim. The ultimate outcome of the matter could not be determined and no provision for any liability that may result was made in the financial statements.

Responsibilities of the accounting authority for the financial statements

8. The board of directors, which constitutes the accounting authority is responsible for the preparation and fair presentation of the financial statements in accordance with the SA Standards of GRAP and the requirements of the PFMA and for such internal control as the accounting authority determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

9. In preparing the financial statements, the accounting authority is responsible for assessing the public entity's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the public entity or to cease operations, or has no realistic alternative but to do so.

Auditor-general's responsibilities for the audit of the financial statements

10. My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the 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

aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

11. A further description of my responsibilities for the audit of the financial statements is included in the annexure to this auditor's report.

Report on the audit of the annual performance report

Introduction and scope

12. In accordance with the Public Audit Act 25 of 2004 (PAA) and the general notice issued in terms thereof, I have a responsibility to report on the usefulness and reliability of the reported performance information against predetermined objectives for selected programme presented in the annual performance report. I performed procedures to identify material findings but not to gather evidence to express assurance.

13. My procedures address the usefulness and reliability of the reported performance information, which must be based on the public entity's approved performance planning documents. I have not evaluated the completeness and appropriateness of the performance indicators included in the planning documents. My procedures do not examine whether the actions taken by the public entity enabled service delivery. My procedures do not extend to any disclosures or assertions relating to the extent of achievements in the current year or planned performance strategies and information in respect of future periods that may be included as part of the reported performance information. Accordingly, my findings do not extend to these matters.

14. I evaluated the usefulness and reliability of the reported performance information in accordance with the criteria developed from the performance management and reporting framework, as defined in the general notice, for the following selected programme presented in the public entity's annual performance report for the year ended 31 March 2022:

15.

Programme	Pages in the annual performance report
Programme 3 –Energy efficiency	40-42

16. I performed procedures to determine whether the reported performance information was properly presented, and whether performance was consistent with the approved performance planning documents. I performed further procedures to determine whether the indicators and related targets were measurable and relevant, and assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.

17. I did not identify any material findings on the usefulness and reliability of the reported performance information for this programme:

– Programme 3 – Energy efficiency

Other matter

18. I draw attention to the matter below.

Achievement of planned targets

19. to the annual performance report on pages 22 to 43 for information on the achievement of planned targets for the year and management's explanations provided for the under/over achievement of targets. This information should be considered in the context of the material findings on the usefulness, and reliability of the reported performance information in paragraphs 13 to 16 of this report.

Report on the audit of compliance with legislation

Introduction and scope

20. In accordance with the PAA and the general notice issued in terms thereof, I have a responsibility to report material findings on the public entity's compliance with specific matters in key legislation. I performed procedures to identify findings but not to gather evidence to express assurance.

21. I did not identify any material findings on compliance with the specific matters in key legislation set out in the general notice issued in terms of the PAA.

Other information

22. The accounting authority is responsible for the other information. The other information comprises the information included in the annual report, which includes the chief executive officer' report and the audit committee's report. The other information does not include the financial statements, the auditor's report, and the selected programme presented in the annual performance report that have been specifically reported in this auditor's report.

23. My opinion on the financial statements and findings on the reported performance information and compliance with legislation, do not cover the other information, and I do not express an audit opinion or any form of assurance conclusion on it.

24. In connection with my audit, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements and the selected programme presented in the annual performance report, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

25. If, based on the work I have performed, I conclude that there is a material misstatement in this other information, I am required to report that fact.

26. I have nothing to report in this regard.

Internal control deficiencies

27. I considered internal control relevant to my audit of the financial statements, reported performance information and compliance with applicable legislation, however, my objective was not to express any form of assurance on it. I did not identify any significant deficiencies in internal control.

Auditor General

Johannesburg

31 July 2022

AUDITOR-GENERAL
SOUTH AFRICA

Auditing to build public confidence

Annexure — Auditor-general's responsibility for the audit

1. As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements, and the procedures performed on reported performance information for the selected programme, and on the public entity's compliance with respect to the selected subject matters.

Financial statements

2. In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I 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 my 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 public entity's internal control.
   – evaluate the appropriateness of accounting policies used, and the reasonableness of accounting estimates and related disclosures made by the board of directors, which constitutes the accounting authority.
   – conclude on the appropriateness of the accounting authority's use of the going concern basis of accounting in the preparation of the financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists relating to events, or conditions that may cast significant doubt on the ability of the South African National Energy Development Institute to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify my opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause a public entity to cease operating as a going concern
   – evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and determine whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation

Communication with those charged with governance

3. I communicate with the accounting authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

4. Also provide the accounting authority with a statement that I 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 my independence and, where applicable, actions taken to eliminate threats or safeguards applied.

Accounting Authority’s Responsibilities and Approval

The Board of Directors is required by the Public Finance Management Act (PFMA) (Act 1 of 1999), to maintain adequate accounting records and is responsible for the content and integrity of the Annual Financial Statements (AFS) and related financial information included in this report. It is the responsibility of the Board of Directors to ensure that the AFS fairly present the state of affairs of the entity as at the end of the financial year and the results of its operations and cash flows for the period then ended. The External Auditors are engaged to express an independent opinion on the AFS and was given unrestricted access to all financial records and related data.

The AFS have been prepared in accordance with Standards of Generally Recognised Accounting Practice (GRAP) including any interpretations, guidelines and directives issued by the Accounting Standards Board (ASB). The AFS are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgments and estimates.

The Board of Directors acknowledge that they are ultimately responsible for the system of internal financial control established by the entity and place considerable importance on maintaining a strong control environment. To enable the Board of Directors to meet these responsibilities, the Accounting Authority (AA) sets standards for internal control aimed at reducing the risk of error or deficit in a cost-effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the entity and all employees are required to maintain the highest ethical standards in ensuring the entity’s business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of Risk Management in the entity is on identifying, assessing, managing and monitoring all known forms of risk across the entity. While operating risk cannot be fully eliminated, the entity endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The Board of Directors are of the opinion, based on the information and explanations given by Management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the AFS. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or deficit.

The Board of Directors have reviewed the entity’s cash flow forecast for the year to 31 March 2023 and, in the light of this review and the current financial position, they are satisfied that the entity has or has access to adequate resources to continue in operational existence for the foreseeable future. The entity is wholly dependent on the Board of control for continued funding of operations. The AFS are prepared on the basis that the entity is a going concern and that the entity has neither the intention nor the need to liquidate or curtail materially the scale of the entity.

Although the AA are primarily responsible for the financial affairs of the entity, they are supported by the entity's External Auditors, Auditor-General of South Africa (AGSA). The External Auditors are responsible for independently reviewing and reporting on the entity's AFS. The AFS have been examined by the entity's External Auditors and their report is presented on page 2. The AFS set out on pages 65 to 99, which have been prepared on the going concern basis, were approved by the AA on 29 July 2022 and were signed on its behalf by:

Sicelo Xulu
SANEDI Board Chairperson

Statement of Financial Position

	Notes	2022 R '000	2021 R '000
Assets			
Non-Current Assets			
Property, plant and equipment	3	6 116	6 764
Current Assets			
Receivables from exchange transactions	5	18 044	4 744
Cash and cash equivalents	6	303 784	260 613
		321 828	**265 357**
Total Assets		**327 944**	**272 121**
Liabilities			
Current Liabilities			
Payables from exchange transactions	9	6 366	7 227
Unspent conditional grants and receipts	7	145 631	103 411
Employee benefit provisions	8	4 492	5 593
		156 489	**116 231**
Total Liabilities		**156 489**	**116 231**
Net Assets		**171 455**	**155 890**
Accumulated surplus		171 455	155 890
Total Net Assets		**171 455**	**155 890**

Statement of Financial Performance

	Notes	2022 R '000	2021 R '000
Revenue			
Revenue from exchange transactions			
Services Rendered: Sponsorship & Consultancy		6 794	631
Interest received		6 319	7 789
Other income		230	151
Gain on foreign exchange		61	-
Total revenue from exchange transactions		**13 404**	**8 571**
Revenue from non-exchange transactions			
Transfer revenue			
Government grants	12	87 573	80 471
Total revenue	10	**100 977**	**89 042**
Expenditure			
Direct personnel costs	13	(32 962)	(36 792)
Director's remuneration	24	(259)	(269)
Restructuring		281	(281)
Depreciation and amortisation		(3 072)	(2 348)
Reversal of impairments	14	(16)	(77)
Provision for Doubtful Debt	15	11	-
Repairs and maintenance		(114)	(649)
Project development costs	17	(33 834)	(21 009)
Loss on foreign exchange		-	(19)
Operating expenses	16	(15 447)	(12 608)
Total expenditure		**(85 412)**	**(74 052)**
Surplus for the year from continuing operations		15 565	14 990
Discontinued operations	21	-	(90 974)
Surplus (deficit) for the year		**15 565**	**(75 984)**

Statement of Changes in Net Assets

	Accumulated surplus / deficitR '000	Total netassets R '000
Balance at 01 April 2020	**231 874**	**231 874**
Deficit for the year	(75 984)	(75 984)
	(75 984)	(75 984)
Balance at 01 April 2021	**155 890**	**155 890**
Surplus for the year	15 565	15 565
Balance at 31 March 2022	**171 455**	**171 455**

Cash Flow Statement

	Notes	2022 R '000	2021 R '000
Cash flows from operating activities			
Receipts			
Grants		319 488	242 952
Interest Income		10 898	10 838
Services rendered- consultancy and sponsorship		798	767
		331 184	254 557
Payments			
Employee costs		(35 572)	(39 744)
Suppliers		(59 743)	(35 238)
Transfers of grants		(190 262)	(76 782)
		(285 577)	(151 764)
Net cash flows from operating activities	18	**45 607**	**102 791**
Cash flows from investing activities			
Purchase of property, plant and equipment	3	(2 436)	(1 209)
Transfer of functions between entities under common control	21	-	(90 000)
Net cash flows from investing activities		**(2 436)**	**(91 209)**
Net increase/(decrease) in cash and cash equivalents		43 171	11 582
Cash and cash equivalents at the beginning of the year		260 613	249 029
Cash and cash equivalents at the end of the year	6	**303 784**	**260 611**

The accounting policies on pages 70 to 79 and the notes on pages 80 to 99 form an integral part of the Annual Financial Statements (AFS).

Statement of Comparison of Budget and Actual Amounts

Budget on Cash Basis

	Approved budget R '000	Adjustments Amount R '000	Final Budget R '000	Actual on comparable basis R '000	Difference between final budget and actual R '000	Reference
Statement of Financial Performance						
Rendering of services	2 203	-	2 203	6 794	4 591	(a)
Interest received	1 000	-	1 000	6 319	5 319	(b)
Other income	-	-	-	230	230	
Total revenue	**3 203**	**-**	**3 203**	**13 343**	**10 140**	
Revenue from non-exchange transactions						
Revenue						
Government grants and other receipts	88 702	-	88 702	87 573	(1 129)	(c)
Total revenue	**91 905**	**-**	**91 905**	**100 916**	**9 011**	
Expenditure						
Employee costs	(43 139)	-	(43 139)	(32 962)	10 177	(d)
Board of Directors	-	-	-	(259)	(259)	
Administration	-	-	-	281	281	
Depreciation and amortisation	(2 974)	-	(2 974)	(3 072)	(98)	
Impairment loss/ Reversal of impairments	-	-	-	(16)	(16)	
Debt Impairment	-	-	-	11	11	
Repairs and Maintenance	(666)	-	(666)	(114)	552	
Project costs	(29 281)	-	(29 281)	(33 834)	(4 553)	(e)
Operational expenditure	(15 845)	-	(15 845)	(15 447)	398	(f)
Total expenditure	**(91 905)**	**-**	**(91 905)**	**(85 412)**	**6 493**	
Operating surplus	**-**	**-**	**-**	**15 504**	**15 504**	
Gain on foreign exchange	-	-	-	61	61	
Surplus for the year	**-**	**-**	**-**	**15 565**	**15 565**	

Reference

(a) Higher than anticipated revenue due to SANEDI being able to secure additional projects during the year than budgeted. These were implemented during the year resulting in additional revenue for the entity.

(b) Interest received increased due to excess cash reserves maintained during the period under review.

(c) The revenue is lower than anticipated due to some donor funded projects coming to an end and no longer being ringfenced,this would include projects for the solar payback and the Energy Efficiency Demand Side Management (EEDSM) Hub.

(d) Employee costs less than anticipated due to unfilled vacancies, mainly due to vacancies for General Managers.

(e) The variance is due to accelerated spending and in line with the performance and attainment of targets. There was also increased spending on the projects due to the retainment of the surpluses from National Treasury for committed projects.

(f) Operational Expenditure in line with budgeted and mainly made up of consulting, computer and administration costs.

Accounting Policies

1. Presentation of Annual Financial Statements

The AFS have been prepared in accordance with the Standards of Generally Recognised Accounting Practice (GRAP), issued by the Accounting Standards Board in accordance with Section 91(1) of the Public Finance Management Act(Act 1 of 1999).

These AFS have been prepared on an accrual basis of accounting and are in accordance with historical cost convention as the basis of measurement, unless specified otherwise. They are presented in South African Rand. The amounts are rounded off to the nearest thousands.

A summary of the significant accounting policies, which have been consistently applied in the preparation of these AFS, are disclosed below.

These accounting policies are consistent with the previous period.

1.1 Presentation currency

These AFS are presented in South African Rand, which is the functional currency of the entity.

1.2 Going concern assumption

These AFS have been prepared based on the expectation that the entity will continue to operate as a going concern for at least the next 12 months.

1.3 Materiality

Material omissions or misstatements of items are material if they could, individually or collectively, influence the decisions or assessments of users made on the basis of the financial statements. Materiality depends on the nature or size of the omission or misstatement judged in the surrounding circumstances. The nature or size of the information item, or a combination of both, could be the determining factor.

Assessing whether an omission or misstatement could influence decisions of users, and so be material, requires consideration of the characteristics of those users. The Framework for the preparation and presentation of financial statements states that users are assumed to have a reasonable knowledge of Government, its activities, accounting and a willingness to study the information with reasonable diligence. Therefore, the assessment takes into account how users with such attributes could reasonably be expected to be influenced in making and evaluating decisions.

1.4 Significant judgements and sources of estimation uncertainty

In preparing the AFS, Management is required to make estimates and assumptions that affect the amounts represented in the AFS and related disclosures. Use of available information and the application of judgement is inherent in the formation of estimates. Actual results in the future could differ from these estimates which may be material to the AFS. Significant judgements include:

Provisions

Provisions were raised and Management determined an estimate based on the information available. Additional disclosure of these estimates of provisions are included in note 8 - Provisions are in relation to bonus and restructuring.

Allowance for doubtful debts

On debtors an impairment loss is recognised in surplus and deficit when there is objective evidence that it is impaired. The impairment is measured as the difference between the debtors carrying amount and the present value of estimated future cash flows discounted at the effective interest rate, computed at initial recognition.

Useful lives and residual of assets

The entity's Management determines the estimated useful lives and residual value of assets. These estimates are assessed annually as per GRAP requirements.

Going concern

Management considers key financial metrics in its approved medium-term budgets, together with its existing term facilities, to conclude that the going concern assumption used in the compiling of its annual financial statements is relevant. The entity is dependent on grant funding.

For other provisions, estimates are made of legal or constructive obligations resulting in the raising of provisions, and the expected date of probable outflow of economic benefits to assess whether the provision should be discounted.

1.5 Property, plant and equipment

Property, plant and equipment is initially measured at cost.

The cost of an item of property, plant and equipment is the purchase price and other costs attributable to bring

Accounting Policies (continued)

the asset to the location and condition necessary for it to be capable of operating in the manner intended by Management. Trade discounts and rebates are deducted in arriving at the cost.

When assets are acquired through a non-exchange transaction, its cost is its fair value as at date of acquisition. Property, plant and equipment is carried at cost less accumulated depreciation and any impairment loss.

Property, plant and equipment are depreciated on the straight line basis over their expected useful lives to their estimated residual value. The useful lives of items of property, plant and equipment have been assessed as follows:

Item	Depreciation method	Average useful life
Furniture and fixtures	Straight line	2-15 years
Motor vehicles	Straight line	5 years
Office equipment	Straight line	5 years
Computer equipment	Straight line	3 years
Leasehold improvements	Straight line	over the lease period
Communication equipment	Straight line	2-15 years

The gain or loss arising from the derecognition of an item of property, plant and equipment is included in surplus or deficit when the item is derecognised. The gain or loss arising from the derecognition of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

The entity separately discloses expenditure to repair and maintain property, plant and equipment in the notes to the financial statements (see note 3).

1.6 Intangible assets

An asset is identifiable if it either:

- is separable, i.e. is capable of being separated or divided from an entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable assets or liability, regardless of whether the entity intends to do so, or
- arises from binding arrangements (including rights from contracts), regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

An intangible asset is recognised when:

- it is probable that the expected future economic benefits or service potential that are attributable to the asset will flow to the entity, and
- the cost or fair value of the asset can be measured reliably.

The entity assesses the probability of expected future economic benefits or service potential using reasonable and supportable assumptions that represent Management's best estimate of the set of economic conditions that will exist over the useful life of the asset.

Where an intangible asset is acquired through a non-exchange transaction, its initial cost at the date of acquisition is measured at its fair value as at that date.

Expenditure on research (or on the research phase of an internal project) is recognised as an expense when it is incurred.

An intangible asset arising from development (or from the development phase of an internal project) is recognised when:

- it is technically feasible to complete the asset so that it will be available for use or sale,
- there is an intention to complete and use or sell it,
- there is an ability to use or sell it,
- it will generate probable future economic benefits or service potential,
- there are available technical, financial and other resources to complete the development and to use or sell the asset, and
- the expenditure attributable to the asset during its development can be measured reliably.

Intangible assets are carried at cost less any accumulated amortisation and any impairment losses.

An intangible asset is regarded as having an indefinite useful life when, based on all relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows or service potential. Amortisation is not provided for these intangible assets, but they are tested for impairment annually and whenever there is an indication that the asset may be impaired. For all other intangible assets amortisation is provided on a straight line basis over their useful life.

The amortisation period and the amortisation method for intangible assets are reviewed at each reporting date.

Accounting Policies (continued)

Reassessing the useful life of an intangible asset with a finite useful life after it was classified as indefinite is an indicator that the asset may be impaired. As a result the asset is tested for impairment and the remaining carrying amount is amortised over its useful life:

Item	Depreciation method	Average useful life
Computer software, other	Straight line	2 years

The gain or loss arising from the derecognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the intangible asset. Such a difference is recognised in surplus or deficit when the intangible asset is derecognised.

1.7 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or a residual interest of another entity.

The amortised cost of a financial asset or financial liability is the amount at which the financial asset or financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount, and minus any reduction (directly or through the use of an allowance account) for impairment or uncollectibility.

A concessionary loan is a loan granted to or received by an entity on terms that are not market related.

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

Derecognition is the removal of a previously recognised financial asset or financial liability from an entity's Statement of Financial Position.

A derivative is a financial instrument or other contract with all three of the following characteristics:

- Its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract (sometimes called the 'underlying'),
- It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors, or
- It is settled at a future date.

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, an entity shall estimate cash flows considering all contractual terms of the financial instrument (for example, prepayment, call and similar options) but shall not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate (see the Standard of GRAP on Revenue from Exchange Transactions), transaction costs, and all other premiums or discounts. There is a presumption that the cash flows and the expected life of a group of similar financial instruments can be estimated reliably. However, in those rare cases when it is not possible to reliably estimate the cash flows or the expected life of a financial instrument (or group of financial instruments), the entity shall use the contractual cash flows over the full contractual term of the financial instrument (or group of financial instruments).

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable willing parties in an arm's length transaction.

A financial asset is:

- Cash,
- a residual interest of another entity, or a contractual right to:

Accounting Policies (continued)

  - receive cash or another financial asset from another entity, or
  - exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity.

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.

A financial liability is any liability that is a contractual obligation to:

- deliver cash or another financial asset to another entity, or
- exchange financial assets or financial liabilities under conditions that are potentially unfavourable to the entity.

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

Liquidity risk is the risk encountered by an entity in the event of difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset.

Loan commitment is a firm commitment to provide credit under pre-specified terms and conditions.

Loans payable are financial liabilities, other than short-term payables on normal credit terms.

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk.

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market.

A financial asset is past due when a counterparty has failed to make a payment when contractually due.

A residual interest is any contract that manifests an interest in the assets of an entity after deducting all of its liabilities. A residual interest includes contributions from owners, which may be shown as:

- equity instruments or similar forms of unitised capital,
- a formal designation of a transfer of resources (or a class of such transfers) by the parties to the transaction as forming part of an entity's net assets, either before the contribution occurs or at the time of the contribution, or
- formal agreement, in relation to the contribution, establishing or increasing an existing financial interest in the net assets of an entity.

Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability. An incremental cost is one that would not have been incurred if the entity had not acquired, issued or disposed of the financial instrument.

Financial instruments at amortised cost are non-derivative financial assets or non-derivative financial liabilities that have fixed or determinable payments, excluding those instruments that:

- the entity designates at fair value at initial recognition, or
- are held for trading.

Financial instruments at cost are investments in residual interests that do not have a quoted market price in an active market, and whose fair value cannot be reliably measured.

Financial instruments at fair value comprise financial assets or financial liabilities that are:

- Derivatives,
- contingent consideration of an acquirer in a transfer of functions between entities not under common control to which the Standard of GRAP on Transfer of Functions Between Entities Not Under Common Control (GRAP 106) applies combined instruments that are designated at fair value, and
- instruments held for trading.
- A financial instrument is held for trading if:
  - it is acquired or incurred principally for the purpose of selling or repurchasing it in the near-term, or
  - on initial recognition it is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short term profit-taking,

Accounting Policies (continued)

- non-derivative financial assets or financial liabilities with fixed or determinable payments that are designated at fair value at initial recognition, and
- financial instruments that do not meet the definition of financial instruments at amortised cost or financial instruments at cost.

Classification

The entity has the following types of financial assets (classes and category) as reflected on the face of the Statement of Financial Position or in the notes thereto:

Class	Category
Investments	Financial asset measured at amortised cost
Trade and other receivables	Financial asset measured at amortised cost
Cash and cash equivalents	Financial asset measured at amortised cost

The entity has the following types of financial liabilities (classes and category) as reflected on the face of the Statement of Financial Position or in the notes thereto:

Class	Category
Trade and other Payables	Financial liability measured at amortised cost

1.8 Leases

A lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership. When a lease includes both land and buildings elements, the entity assesses the classification of each element separately .

Operating leases - lessee

Operating lease payments are recognised as an expense on a straight-line basis over the lease term. The difference between the amounts recognised as an expense and the contractual payments are recognised as an operating lease asset or liability.

1.9 Impairment of cash-generating assets

Cash-generating assets are assets used with the objective of generating a commercial return. Commercial return means that positive cash flows are expected to be significantly higher than the cost of the asset.

Impairment is a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation (amortisation).

Carrying amount is the amount at which an asset is recognised in the Statement of Financial Position after deducting any accumulated depreciation and accumulated impairment losses thereon.

A cash-generating unit is the smallest identifiable group of assets used with the objective of generating a commercial return that generates cash inflows from continuing use that are largely independent of the cash inflows from other assets or groups of assets.

Costs of disposal are incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.

Depreciation (Amortisation) is the systematic allocation of the depreciable amount of an asset over its useful life.

Fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Recoverable amount of an asset or a cash-generating unit is the higher its fair value less costs to sell and its value in use. Useful life is either:

- the period of time over which an asset is expected to be used by the entity, or
- the number of production or similar units expected to be obtained from the asset by the entity.

judgements made by Management in applying the criteria to designate assets as cash-generating assets or non-cash- generating assets, are as follows:

Accounting Policies (continued)

1.10 Employee benefits

Employee benefits are all forms of consideration given by an entity in exchange for service rendered by employees.

A qualifying insurance policy is an insurance policy issued by an insurer that is not a related party (as defined in the Standard of GRAP on Related Party Disclosures) of the reporting entity, if the proceeds of the policy can be used only to pay or fund employee benefits under a defined benefit plan and are not available to the reporting entity's own creditors (even in liquidation) and cannot be paid to the reporting entity, unless either:

- the proceeds represent surplus assets that are not needed for the policy to meet all the related employee benefit obligations, or
- the proceeds are returned to the reporting entity to reimburse it for employee benefits already paid.

Termination benefits are employee benefits payable as a result of either:

- an entity's decision to terminate an employee's employment before the normal retirement date, or an employee's decision to accept voluntary redundancy in exchange for those benefits.

Other long-term employee benefits are employee benefits (other than post-employment benefits and termination benefits) that are not due to be settled within twelve months after the end of the period in which the employees render the related service.

Vested employee benefits are employee benefits that are not conditional on future employment.

Composite social security programmes are established by Legislation and operate as multi-employer plans to provide post- employment benefits as well as to provide benefits that are not consideration in exchange for service rendered by employees.

A constructive obligation is an obligation that derives from an entity's actions where by an established pattern of past practice, published policies or a sufficiently specific current statement, the entity has indicated to other parties that it will accept certain responsibilities and as a result, the entity has created a valid expectation on the part of those other parties that it will discharge those responsibilities.

Short-term employee benefits

Short-term employee benefits are employee benefits (other than termination benefits) that are due to be settled within twelve months after the end of the period in which the employees render the related service.

Short-term employee benefits include items such as:

- wages, salaries and social security contributions,
- short-term compensated absences (such as paid annual leave and paid sick leave) where the compensation for the absences is due to be settled within twelve months after the end of the reporting period in which the employees render the related employee service,
- bonus, incentive and performance related payments payable within twelve months after the end of the reporting period in which the employees render the related service, and
- non-monetary benefits (for example, medical care, and free or subsidised goods or services such as housing, cars and cellphones) for current employees.

When an employee has rendered service to the entity during a reporting period, the entity recognise the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service:

- as a liability (accrued expense), after deducting any amount already paid. If the amount already paid exceeds the undiscounted amount of the benefits, the entity recognise that excess as an asset (prepaid expense) to the extent that the prepayment will lead to, for example, a reduction in future payments or a cash refund, and
- as an expense, unless another Standard requires or permits the inclusion of the benefits in the cost of an asset.

The expected cost of compensated absences is recognised as an expense as the employees render services that increase their entitlement or, in the case of non-accumulating absences, when the absence occurs. The entity measures the expected cost of accumulating compensated absences as the additional amount that the entity expects to pay as a result of the unused entitlement that has accumulated at the reporting date.

Accounting Policies (continued)

The entity recognise the expected cost of bonus, incentive and performance related payments when the entity has a present legal or constructive obligation to make such payments as a result of past events and a reliable estimate of the obligation can be made. A present obligation exists when the entity has no realistic alternative but to make the payments.

Post-employment benefits

Post-employment benefits are employee benefits (other than termination benefits) which are payable after the completion of employment.

Post-employment benefit plans are formal or informal arrangements under which an entity provides post-employment benefits for one or more employees.

Multi-employer plans are defined contribution plans (other than State plans and composite social security programmes) or defined benefit plans (other than State plans) that pool the assets contributed by various entities that are not under common control and use those assets to provide benefits to employees of more than one entity, on the basis that contribution and benefit levels are determined without regard to the identity of the entity that employs the employees concerned.

1.11 Provisions and contingencies

Provisions are recognised when:

- the entity has a present obligation as a result of a past event,
- it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation, and
- a reliable estimate can be made of the obligation.

The amount of a provision is the best estimate of the expenditure expected to be required to settle the present obligation at the reporting date.

Where the effect of time value of money is material, the amount of a provision is the present value of the expenditures expected to be required to settle the obligation.

The discount rate is a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

Where some or all of the expenditure required to settle a provision is expected to be reimbursed by another party, the reimbursement is recognised when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement is treated as a separate asset. The amount recognised for the reimbursement does not exceed the amount of the provision.

Provisions are reviewed at each reporting date and adjusted to reflect the current best estimate. Provisions are reversed if it is no longer probable that an outflow of resources embodying economic benefits or service potential will be required, to settle the obligation.

Where discounting is used, the carrying amount of a provision increases in each period to reflect the passage of time. This increase is recognised as an interest expense.

A provision is used only for expenditures for which the provision was originally recognised. Provisions are not recognised for future operating surplus.

If an entity has a contract that is onerous, the present obligation (net of recoveries) under the contract is recognised and measured as a provision.

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 23.

1.12 Commitments

Items are classified as commitments when an entity has committed itself to future transactions that will normally result in the outflow of cash.

Disclosures are required in respect of unrecognised contractual commitments.

Commitments for which disclosure is necessary to achieve a fair presentation should be disclosed in a note to the financial statements, if both the following criteria are met:

- contracts should be non-cancellable or only cancellable at significant cost (for example, contracts for computer or building maintenance services), and
- contracts should relate to something other than the routine, steady, State business of the entity – therefore salary commitments relating to employment contracts or social security benefit commitments are excluded.

Accounting Policies (continued)

1.13 Translation of foreign currencies

Foreign currency transactions

A foreign currency transaction is recorded, on initial recognition in Rands, by applying to the foreign currency amount the spot exchange rate between the functional currency and the foreign currency at the date of the transaction.

At each reporting date:

- foreign currency monetary items are translated using the closing rate,
- non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction, and
- non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous Annual Financial Statements are recognised in surplus or deficit in the period in which they arise.

When a gain or loss on a non-monetary item is recognised directly in net assets, any exchange component of that gain or loss is recognised directly in net assets. When a gain or loss on a non-monetary item is recognised in surplus or deficit, any exchange component of that gain or loss is recognised in surplus or deficit.

Cash flows arising from transactions in a foreign currency are recorded in Rands by applying to the foreign currency amount the exchange rate between the Rand and the foreign currency at the date of the cash flow.

1.14 Fruitless and wasteful expenditure

Fruitless expenditure means expenditure which was made in vain and would have been avoided had reasonable care been exercised.

Fruitless and wasteful expenditure is accounted for in line with all relating requirements, including, but not limited to, ruling Legislation, Regulations, Frameworks, Circulars, Instruction Notes, Practice Notes, Guidelines etc (as applicable).

1.15 Irregular expenditure

Irregular expenditure as defined in Section 1 of the PFMA is expenditure other than unauthorised expenditure, incurred in contravention of or that is not in accordance with a requirement of any applicable Legislation, including -

- this Act, or
- the State Tender Board Act, 1968 (Act No. 86 of 1968), or any regulations made in terms of the Act, or
- any Provincial Legislation providing for procurement procedures in that Provincial Government.

National Treasury practice note no. 4 of 2008/2009 which was issued in terms of sections 76(1) to 76(4) of the PFMA requires the following (effective from 1 April 2008).

Irregular expenditure is recognised when the amount can be reliably determined and to extent that the amount of the irregular expenditure has not been recognised as a receivable. The amount recognised is equal to the fair value of the transaction unless it is impractical to determine.

The Irregular expenditure receivables are measured at the amount that is expected to be recovered.

Irregular expenditure that was incurred and identified during the current financial year and for which condonement is being awaited at year end will be disclosed in the notes to the financial statements as well as any irregular expenditure was incurred in the previous financial year and is only condoned in the following financial year, and Irregular expenditure that was incurred and identified during the current financial year and which was not condoned by the National Treasury or the relevant authority.

1.16 Budget information

The approved budget is prepared on a accrual basis and presented by economic classification linked to performance outcome objectives.

The approved budget covers the fiscal period 2021/2022.

The budget for the economic entity includes all the entities approved budgets under its control.

Accounting Policies (continued)

The AFS and the budget are on the same basis of accounting therefore a comparison with the budgeted amounts for the reporting period have been included in the Statement of Comparison of Budget and Actual Amounts.

The Statement of Comparative and Actual Information has been included in the AFS as the recommended disclosure when the AFS and the budget are on the same basis of accounting as determined by National Treasury.

The AFS and the budget are not on the same basis of accounting therefore a reconciliation between the Statement of Financial Performance and the budget have been included in the AFS.

1.17 Related parties

A related party is a person or an entity with the ability to control or jointly control the other party, or exercise significant influence over the other party, or vice versa, or an entity that is subject to common control, or joint control.

Control is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

Joint control is the agreed sharing of control over an activity by a binding arrangement, and exists only when the strategic financial and operating decisions relating to the activity require the unanimous consent of the parties sharing control (the venturers).

Related party transaction is a transfer of resources, services or obligations between the reporting entity and a related party, regardless of whether a price is charged.

Significant influence is the power to participate in the financial and operating policy decisions of an entity, but is not control over those policies.

Management are those persons responsible for planning, directing and controlling the activities of the entity, including those charged with the Governance of the entity in accordance with Legislation, in instances where they are required to perform such functions.

Close members of the family of a person are considered to be those family members who may be expected to influence, or be influenced by, that Management in their dealings with the entity.

The entity is exempt from disclosure requirements in relation to related party transactions if that transaction occurs within normal supplier and/or client/recipient relationships on terms and conditions no more or less favourable than those which it is reasonable to expect the entity to have adopted if dealing with that individual entity or person in the same circumstances and terms and conditions are within the normal operating parameters established by that reporting entity's legal mandate.

Where the entity is exempt from the disclosures in accordance with the above, the entity discloses narrative information about the nature of the transactions and the related outstanding balances, to enable users of the entity's financial statements to understand the effect of related party transactions on its AFS.

1.18 Events after reporting date

Events after reporting date are those events, both favourable and unfavourable, that occur between the reporting date and the date when the financial statements are authorised for issue. Two types of events can be identified:

- those that provide evidence of conditions that existed at the reporting date (adjusting events after the reporting date), and
- those that are indicative of conditions that arose after the reporting date (non-adjusting events after the reporting date).

The entity will adjust the amount recognised in the financial statements to reflect adjusting events after the reporting date once the event occurred.

The entity will disclose the nature of the event and an estimate of its financial effect or a statement that such estimate cannot be made in respect of all material non-adjusting events, where non-disclosure could influence the economic decisions of users taken on the basis of the financial statements.

Notes to the Annual Financial Statements

2. New standards and interpretations

2.1 Standards and Interpretations early adopted

The entity has chosen to early adopt the following standards and interpretations:

Standard/ Interpretation:	Effective date: Years beginning on or after	Expected impact:
GRAP 21: The Effect of Past Decisions on Materiality	01 April 2023	The adoption of this has not had a material impact on the results of the company, but has resulted in more disclosure than would have previously been provided in the Financial Statements

2.2 Standards and interpretations issued, but not yet effective

The entity has not applied the following standards and interpretations, which have been published and are mandatory for the entity's accounting periods beginning on or after 01 April 2022 or later periods:

Standard/ Interpretation:	Effective date: Years beginning on orafter	Expected impact:
GRAP 25 (as revised): Employee Benefits	To be determined	Unlikely there will be a material impact
Guideline: Guideline on the Application of Materiality to Financial Statements	To be determined	Unlikely there will be a material impact
GRAP 104 (as revised): Financial Instruments	01 April 2025	Unlikely there will be a material impact
GRAP 2020: Improvements to the standards of GRAP 2020	01 April 2023	Unlikely there will be a material impact
GRAP 1 (amended): Presentation of Financial Statements	01 April 2023	Unlikely there will be a material impact

Notes to the Annual Financial Statements (continued)

3. Property, plant and equipment

Figures in Rand thousand

	2022			2021		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
Furniture and fixtures	893	(726)	167	893	(578)	315
Motor vehicles	429	(16)	413	211	(211)	-
Office equipment	221	(197)	24	291	(225)	66
IT equipment	9 494	(4 038)	5 456	8 363	(2 040)	6 323
Leasehold improvements	86	(71)	15	86	(54)	32
Communication equipment	73	(32)	41	97	(69)	28
Total	**11 196**	**(5 080)**	**6 116**	**9 941**	**(3 177)**	**6 764**

Reconciliation of property, plant and equipment - March 2022

	Opening balance	Additions	Depreciation	Impairment loss	Total
Furniture and fixtures	315	-	(148)	-	167
Motor vehicles	-	429	(16)	-	413
Office equipment	66	-	(42)	-	24
IT equipment	6 323	1 985	(2 836)	(16)	5 456
Leasehold improvements	32	-	(17)	-	15
Communication equipment	28	22	(9)	-	41
	6 764	**2 436**	**(3 068)**	**(16)**	**6 116**

Notes to the Annual Financial Statements (continued)

Reconciliation of property, plant and equipment - March 2021

	Opening balance	Additions	Transfers	Depreciation	Impairment loss	Total
Furniture and fixtures	528	-	-	(167)	(46)	315
Motor vehicles	29	-	-	(29)	-	-
Office equipment	118	-	-	(52)	-	66
IT equipment	8 131	1 209	(974)	(2 012)	(31)	6 323
Leasehold improvements	49	-	-	(17)	-	32
Communication equipment	48	-	-	(20)	-	28
	8 903	**1 209**	**(974)**	**(2 297)**	**(77)**	**6 764**

During the financial year, assets with a total book value of R74 were written off. The acquisition cost of these assets were R941 042.

	2022 R '000	2021 R '000

Pledged as security

There are no assets that are pledged as security.

Assets subject to operating lease (Net carrying amount)

Leasehold improvements	15	32

Leasehold Improvements

Leasehold Improvements relate to the operating lease disclosure on the operating lease is included in note 22.

Expenditure incurred to repair and maintain property, plant and equipment

Expenditure incurred to repair and maintain property, plant and equipment included in Statement of Financial Performance.

Repairs and Maintenance	111	-

Notes to the Annual Financial Statements (continued)

4. Intangible assets

	2022			2021		
	Cost / Valuation	Accumulated amortisation and accumulated impairment	Carrying value	Cost / Valuation	Accumulated amortisation and accumulated impairment	Carrying value
Computer software, internally generated	50	(50)	-	50	(50)	-

Reconciliation of intangible assets - March 2021

	Opening balance	Amortisation	Total
Computer software, internally generated	51	(51)	-

5. Receivables from exchange transactions

	2022 R '000	2021 R '000
Trade receivables	1 547	-
Other receivables	11 251	393
Interest receivable	966	399
Employees study loans	63	96
Provision for financial asset: Lease Deposit	(257)	(268)
Prepaid expenses	2 443	1 712
Project Prepayments	2 031	2 412
	18 044	**4 744**

Prepayments

The prepayments includes payment for insurance cover, subscriptions, licences and project related expenditure membership fees. All receivables disclosed are from exchange transactions only.

Other Receivables

The significant increment of other receivables is due to an overpayment to a supplier that has subsequently been recovered:

Trade and other receivables past due but not impaired

Trade and other Receivables are not pledged as security. The entity does not hold any collateral as security. Trade and other receivables which are less than 6 months past due are not considered to be impaired. At 31 March 2022, R0 (2021: R0) were past due but not impaired. .All trade receivables are current and not past due.

Notes to the Annual Financial Statements (continued)

	2022 R '000	2021 R '000

Trade and other receivables impaired

As of 31 March 2022,the financial asset of R257 000 (2021 R268 000) were impaired and provided for.

The amount of the provision was R257 000 as of 31 March 2022 (2021: 268 000).

The ageing of these other financial asset is as follows:

	2022 R '000	2021 R '000
Over 6 months	257	268
Reconciliation of provision for impairment of trade and other receivables		
Opening balance	268	268
Amounts recovered	(11)	-
	257	**268**

The creation and release of provision for impaired receivables have been included in operating expenses in surplus or deficit (note 15).

The maximum exposure to credit risk at the reporting date is the fair value of each class of loan mentioned above. The entity doesn't hold any collateral as security.

SANEDI previously leased a unit on Upper Grayston Office Park. The lease commenced in May 2012 and terminated in April 2017. Subsequently there was a dispute with the Landlord over the deposit, the amount has been provided for.

6. Cash and cash equivalents

	2022 R '000	2021 R '000
Cash and cash equivalents consist of:		
Cash on hand	15	-
Bank balances	303 769	260 613
	303 784	**260 613**

Cash and cash equivalent consists of cash on hand and balances with financial institutions and investments in money market instruments. There are no restrictions placed on the realisation or usability of cash balances. The entity does not have access to any additional undrawn facilities.

Notes to the Annual Financial Statements (continued)

7. Unspent conditional grants and receipts

Unspent conditional grants can be attributed to ring fenced projects from various donors that are in progress at the end of the financial year. These amounts are invested in money market accounts and interest accrues to the invested money.

Unspent conditional grants and receipts comprises of:

	2022 R '000	2021 R '000
Unspent conditional grants and receipts		
Unspent grants	145 631	103 411
Movement during the year		
Balance at the beginning of the year	103 413	15 513
Additions during the year	245 141	169 352
Interest and Income recognition during the year	(7 315)	(4 670)
Grant Repayments/Transfers/Other	(195 607)	(76 782)
	145 632	**103 413**
Unspent conditional grants and third party funds(continued)		
European Union Project (COCATE)	295	284
FP7	-	33
SA Coal Roadmap	773	745
SDC Monitoring & Implementation Project	-	198
Danish Renewable Energy Programme	1 427	1 374
EEDSM Hub	-	233
WASA Support	972	938
SolarTech Roadmap	4 758	4 959
SOLTRAIN	3 539	1 841
Austin Offshore	339	327
SolarPayback	-	602
WASA 3	30	19
Department of Defense	2 207	2 789
1M Cool Roofs Challenge	879	1 629
EE Industrial comp 1 & 2	2 144	1 369
Energy Secretariat	120 954	67 044
EU Public Buildings	4 417	8 792
EU WWWTPS	3	8 085
S&L Project	1 847	2 152
GDID	500	-
GIZ	548	-
GDARD	-	-
	145 632	**103 413**

Included in “other” is the Management fees that are due to the entity and transfers to other public institutions.

Notes to the Annual Financial Statements (continued)

Deferred Income Reconciliation March 2022	Opening Balance	Additional Receipts	Deferred Income Recognised	Grant Repayments/ Transfers/ Other	Interest Earned	Closing Balance
European Union Project (COCATE)	284	-	-	-	11	295
FP7	33	-	-	35	2	-
SA Coal Roadmap	745	-	-	-	28	773
SDC EE Monitoring & Implementation	198	-	-	205	7	-
Danish Renewable Energy	1 374	-	-	-	53	1 427
Programme EEDSM Hub	233	-	-	242	9	-
WASA Support	938	-	2	-	36	972
SolarTech	4 959	-	389	-	188	4 758
Soltrain	1 841	1 637	29	-	90	3 539
Austin Offshore	327	-	-	-	12	339
SolarPayback	602	-	-	623	21	-
WASA 3	19	-	-	-	11	30
DOD-Solar Water Heating	2 789	-	672	-	90	2 207
1M Cool Roofs Challenge	1 629	73	868	-	45	879
EE Industrial Comp	1 369	3 224	2 519	-	70	2 144
Energy Secretariat	67 044	234 912	-	184 855	3 853	120 954
EU Public Buildings	8 792	-	2 097	2 558	280	4 417
EU WWWTPS	8 085	-	1 264	7 004	186	3
S&L Project	2 152	-	382	-	77	1 847
GDID	-	500	-	-	-	500
GIZ	-	1 561	1 019	-	6	548
GDARD	-	3 234	3 149	85	-	-
Total	**103 413**	**245 141**	**12 390**	**195 607**	**5 075**	**145 632**

Notes to the Annual Financial Statements (continued)

Deferred Income Reconciliation March 2021	**Opening Balance**	**Additional Receipts**	**Deferred Income Recognised**	**Grant Repayments**	**Interest Earned**	**Closing Balance**
European Union Project (COCATE)	273	-	-	-	11	284
FP7	32	-	-	-	1	33
SA Coal Roadmap	717	-	-	-	28	745
SDC EE Monitoring & Implementation	190	-	-	-	8	198
Danish Renewable Energy Programme	1 327	-	1	-	48	1 374
EEDSM Hub	224	-	-	-	9	233
WASA Support	903	-	1	-	36	938
SolarTech	7 510	-	2 887	-	336	4 959
Soltrain	1 256	550	39	-	74	1 841
Austin Offshore	311	-	-	-	16	327
SolarPayback	578	-	-	-	24	602
WASA 3	18	-	-	-	1	19
DOD-Solar Water Heating	85	3 030	393	-	67	2 789
1M Cool Roofs Challenge	773	987	181	-	50	1 629
EE Industrial Comp	1 316	-	-	-	53	1 369
Energy Secretariat	-	145 940	3 329	76 782	1 215	67 044
EU Public Buildings	-	8 700	-	-	92	8 792
EU WWTPS	-	8 000	-	-	85	8 085
S&L	-	2 145	24	-	31	2 152
Total	**15 513**	**169 352**	**6 855**	**76 782**	**2 185**	**103 413**

Notes to the Annual Financial Statements (continued)

8. Employee benefit provisions

Reconciliation of provisions- 2022

	Opening Balance	Additions	Utilised during the year	Reversed during the year	Total
Restructuring	281	-	(281)	-	-
Bonus incentives	5 312	4 492	(4 593)	(719)	4 492
	5 593	**4 492**	**(4 874)**	**(719)**	**4 492**

Reconciliation of provisions - 2021

	Opening Balance	Additions	Reversed during the year	Total
Restructuring	-	281	-	281
Bonus incentives	10 122	5 312	(10 122)	5 312
	10 122	**5 593**	**(10 122)**	**5 593**

Restructuring provision

The entity as part of its restructuring process winded down the Working For Energy(WfE) programme in the prior year and had raised a provision as it expected an outflow of economic benefits in the proceeding financial year.

During the current financial year, the entity reimbursed the affected employee/s which result a reversal of the liability as the amount had been recognised as an expense.

Bonus incentives provision

The bonus provision is calculated based on the company performance, division's performance, and individual's performance. This is at the discretion and consideration of the Board, once company performance has been audited. In the 2021/22. The reversal relates to the provision for the March 2020/21, which was paid during the year. An additional provision raised for the March 2021/22 Year.

9. Payables from exchange transactions

	2022 R '000	2021 R '000
Trade payables/creditors	184	258
Leave Accrual	1 973	1 852
Accrued expense	4 120	3 386
SDL control acc	1	40
WCA control	53	158
Union Fees	6	5
UIF control acc	-	12
PAYE control acc	29	1 516
	6 366	**7 227**

Notes to the Annual Financial Statements (continued)

	2022 R '000	2021 R '000

10. Revenue

	2022 R '000	2021 R '000
Rendering of services	6 794	631
Interest income	6 319	7 789
Other income	230	151
Government grants	87 573	80 471
	100 916	**89 042**
The amount included in revenue arising from exchanges of goods or services are asfollows:		
Rendering of services	6 794	631
Interest Received	6 319	7 789
Other income	230	151
	13 343	**8 571**
The amount included in revenue arising from non-exchange transactions is as follows:		
Transfer revenue		
Government grants	87 573	80 471

11. Other revenue

	2022 R '000	2021 R '000
Other income	230	151

12. Government grants

	2022 R '000	2021 R '000
Operating grants		
Grants-realisation of deferred transfers	12 391	6 856
DMRE-MTEF realisation	75 182	73 615
	87 573	**80 471**

Notes to the Annual Financial Statements (continued)

13. Employee related costs

	2022 R '000	2021 R '000
Basic	27 290	30 259
Recruitment and relocation costs	-	-
Bonus	3 773	3 844
Medical aid- company contributions	455	761
UIF	84	85
WCA	26	44
SDL	311	234
Leave Accrual	121	419
Provident and Pension Contributions	902	1 146
	32 962	**36 792**

Board Remuneration

	2022 R '000	2021 R '000
Annual Remuneration	259	269

14. Impairment loss

Impairments

Property, plant and equipment

	2022 R '000	2021 R '000
The impairment loss relates to assets that were written off in the current year.	16	77

The main classes of assets affected by impairment losses are:

- Computer Equipment
- Communication Equipment
- Office Equipment

15. Provision for Doubtful Debt

	2022 R '000	2021 R '000
Reversal of debt impairment	(11)	-

Notes to the Annual Financial Statements (continued)

	2022 R '000	2021 R '000

16. Operating expenses

Administration	518	198
Advertising	669	451
Auditors remuneration	1 997	1 282
Bank charges	41	40
Computer expenses	2 954	3 120
Consulting and professional fees	5 589	3 646
Lease rentals	1 259	1 498
Insurance	301	276
Conferences and seminars	410	10
Printing and stationery	112	255
Marketing and promotional expenditure	5	3
Catering and entertainment	28	14
Subscriptions and membership fees	19	19
Telephone and fax	471	1 138
Travel- local	228	181
Employee welfare and training	245	466
Other office running expenses	601	11
	15 447	**12 608**

17. Project development costs

Project costs relate to costs directly associated with the entity's mandate(Programme 2 and Programme 3) which range from Applied Research expenditure, Demonstration Project expenditure as well as Capacity Building projects.

Project Implementation Costs	29 780	15 043
Travel	294	216
Overheads	3 760	5 750
	33 834	**21 009**

Notes to the Annual Financial Statements (continued)

18. Cash generated from operations

	2022 R '000	2021 R '000
Surplus (deficit)	15 565	(75 984)
Adjustments for:		
Depreciation and amortisation	3 072	2 348
Loss on transfer of functions between entities under common control	-	90 974
Impairment loss/ Reversal of impairments	16	77
Provision for doubtful debts	(11)	-
Movements on bonus and restructuring provisions	(1 101)	(4 529)
Changes in working capital:		
Receivables from exchange transactions	(13 300)	(263)
Provision for doubtful debts	11	-
Payables from exchange transactions	(865)	2 270
Unspent conditional grants and receipts	42 220	87 898
	45 607	**102 791**

19. Cash flows of discontinued operations (Refer to note 21)

	2022 R '000	2021 R '000
	-	(90 000)

20. Risk management

Financial Management and financial instruments

Formalisation of a Risk Management Framework is the responsibility of the Company and the Board of Directors.

The framework ensures:

- Efficient allocation of capital across various activities in order to maximize returns and diversification of income streams,
- Risk taking within levels acceptable to the Company as a whole, and
- Efficient Liquidity Management and control of funding costs.
- Improved Risk Management and control.

Whilst the Board is ultimately responsible for the management of risk, the Board relies on Management to operate within the control structures and frameworks, established by the Board and has delegated the responsibility for implementation of the risk framework to function within the business.

Notes to the Annual Financial Statements (continued)

Risk Management structure

The Company's Risk Management Framework is summarized below.

Key responsibilities lie with the following bodies and Committees.

Board of Directors – are responsible for strategic direction, supervision and control of the entity and for defining the entity's tolerance for risk.

Internal Auditor – is responsible for assisting the Board and Management in fulfilling their responsibilities by providing an objective and independent evaluation of the effectiveness of Control, Risk Management and Governance processes.

The nature of key risks to which the entity is exposed is categorized as follows:

2022

Liquidity Risk

The entity's risk to liquidity is as a result of the funds available to cover future commitments. The entity manages Liquidity risk through an ongoing review of future commitments and credit facilities.

Financial assets

As at 31 March 2022	Less than 1 year	Between 1 and 5 years	Over 5 years	Non- Interest	Total
Cash and cash equivalents	303 784	-	-	-	303 784
Trade and other receivables	13 570	-	-	-	13 570
	317 354	**-**	**-**	**-**	**317 354**

Credit risk

Credit risk consist mainly of cash deposits and cash equivalents and debtors. The entity only deposits cash with major banks with high quality credit ratings and limits exposure to any counter party. Receivables comprises interest earned in the money market.

Financial liabilities

As at 31 March 2022	Less than 1 year	Between 1 and 5 years	Over 5 years	Non-Interest	Total
Trade and other payables	4 304	-	-	-	4 304

Market Risk

Interest Risk

The entity has interest- bearing -assets that are affected by interest rates fluctuations, these include bank and cash and cash equivalents. Interest -bearing investments are held with reputable banks to minimise exposure. No significant risks has been identified with regards to interest rates.

Notes to the Annual Financial Statements (continued)

2021

Financial assets

As at 31 March 2021	Less than 1 year	Between 1 and 5 years	Over 5 years	Non-Interest	Total
Cash and cash equivalents	260 613	-	-	-	260 613
Trade and other receivables	620	-	-	-	620
	261 233	**-**	**-**	**-**	**261 233**

Financial liabilities

At 31 March 2021	Less than 5 years	Between 1 and 5 years	Over 5 years	Non-interest	Total
Trade and other payables	6 825	-	-	-	6 825

21. Transfer of functions between entities under common control

Transfer of functions between entities under common control occurring during the prior reporting period

Entities involved in the transfer of functions were:

- South African National Energy Development Institute (SANEDI), and
- Council for Geoscience (CGS)

The following functions were transferred:

The function for the Carbon Capture Utilisation and Storage (CCUS) project was transferred

The Minister of Energy, Honourable G Mantashe, approved the transfer of the CCUS Project from SANEDI to the CGS in a letter dated 24 March 2020. Subsequent to that approval, the SANEDI Board then gave a mandate to Management to transfer the entire CCUS Programme, including all staff employed under the project, to the CGS.

The transfer was finalised on Wednesday, 30 September 2020.

Value of assets

	2022 R '000	2021 R '000
Assets transferred		
Property, plant and equipment	-	(974)
Cash and cash equivalents	-	(90 000)
	-	**(90 974)**
	-	90 974
Difference between the carrying amounts of the assets transferred, the liabilities relinquished and adjustments required to the basis of accounting		
Difference between net assets and the consideration paid	-	90 974
Net cash (outflow) inflow on transfer of function		
Cash transferred	**-**	**(90 000)**

Notes to the Annual Financial Statements (continued)

22. Commitments

Contractual commitments

	2022 R '000	2021 R '000
Total operational commitments		
– Projects	46 946	23 173
– Administration	4 761	5 226
	51 707	**28 399**
Minimum payments due		
– Within one year	43 703	27 092
– second to fifth year	8 004	1 307
	51 707	**28 399**

This committed expenditure relates to projects and operational requirements and will be financed by retained surpluses, existing cash resources, and funded internally.

Operating leases (offices) - as lessee (expense)

	2022 R '000	2021 R '000
Minimum lease payments due		
- within one year	1 522	95
- in second to fifth year inclusive	3 171	-
	4 693	**95**

Operating lease payments represent rentals payable by the entity for its office property. Leases are negotiated for an average term of four years and rentals are fixed for an average of three years. No contingent rent is payable. The operating lease relates to unit 1 on the first floor of Block C, Upper Grayston Office Park, located at Erf 20 Simba Township, Strathavon, Sandton, that SANEDI has leased from CEF (SOC) Ltd.

The lease term is for four years and commenced on 1 May 2021 and terminates on 30 April 2025. SANEDI has the option to renew the lease for another four years from the first day following the termination of the lease. The entity does not have an option to purchase the leased asset at the expiry of the lease period. The escalation clause was not specified and quantified in the agreement, as a result no straight-line adjustment was processed.

Rental expenses (printing equipment) relating to operating leases

	2022 R '000	2021 R '000
Minimum lease payments	**135**	**-**

Operating lease relates to the lease of network printers for a two year period from Konica Minolta (Pty) Ltd. The entity does not have an option to purchase the leased asset at the expiry of the lease period. The entity entered into a lease in the current financial year over two years. The escalation clause was not specified and quantified in the agreement, as a result no straight- line adjustment was processed.

Notes to the Annual Financial Statements (continued)

	2022 R '000	2021 R '000

23. Contingencies

Surplus Funds

SANEDI has reported surpluses for the year ended 31 March 2022 for R15,6million (Surplus 2021: R14,9 million). The surplus is fully committed and SANEDI will be submitting a request for retention of surpluses to the National Treasury.

Contingent liabilities

The entity is involved in a litigation matter at the Labour Court relating to an appeal of a Commission for Conciliation, Mediation and Arbitration (CCMA) arbitration outcome. The matter is currently opposed. At the date of this report there were no damages sought. There are no amounts to disclose, there is no probability of payment and the matter is pending. There is no reimbursement from any third parties for potential obligations of the entity.

24. Related parties

Relationships

Controlling entity	Department of Minerals and Resources
Board Members	Refer to note 24 CEF (SOC) Limited
Entities under common control Entities under common control	Council for Geoscience
Entities not under common control	Department of Science and Innovation

	2022 R '000	2021 R '000
Related party balances		
Property, Plant and Equipment		
Council for Geoscience	-	974
Amounts included in trade and other payables		
CEF (SOC) Limited	1 047	1 040
Cash and Cash Equivalents		
Council for Geoscience	-	90 000
Deferred Revenue		
Department of Science and Innovation	4 155	13 123
Related party transactions		
Revenue received from related parties		
Department of Minerals Energy and Resources	75 182	73 615
Rent paid to related parties		
CEF (SOC) Limited	1 148	1 148
Management fees paid to(received from) related parties		
CEF (SOC) Limited	1 386	1 337
Department of Science and Innovation	4 155	-
Recoveries		
CEF (SOC) Limited	126	748

Notes to the Annual Financial Statements (continued)

Remuneration of Management

Management class: Board members

2022

Name	Directors Remuneration	Total
Mr Sicelo Xulu(Board Chairperson)	53	53
Ms Lungile Mtiya(Deputy Chairperson)	42	42
Ms Abegail Boikhutso	36	36
Ms Tumelo Mashabela	32	32
Ms Yongama Pamla *	21	21
Ms Masaccha Kulekelwe Mbonambi * (Chairperson of the Audit & Risk Committee)	59	59
Mr Mahlatsi Movundlela *	16	16
	259	**259**

2021

Name	Directors Remuneration	Total
Ms P Motsiewla	74	74
Mr Z Koyana	1	1
Mr Buthelezi (Interim Chairperson)	153	153
Mr T Poho	23	23
Ms M Thlabani	18	18
	269	**269**

No emoluments were paid to any individuals members or individuals holding a prescribed office during the year.

* Independent members of Audit & Risk Committees

Notes to the Annual Financial Statements (continued)

25. Management class: Executive Management

2022

	Emoluments	Allowances	Leave	Bonus	Total
Ms L Manamela- Interim Chief Executive Officer	1 856	24	-	-	1 880
Ms L Ramaotsoa-Acting Chief Financial Officer	950	-	-	186	1 136
Mr V Luchtman-Acting Chief Financial Officer	95	-	-	-	95
Dr M Bipath	490	29	134	317	970
Mr S Mhlangu	943	22	136	176	1 277
Mr D Mahuma	-	-	127	224	351
Mr B Bredenkamp	1 501	24	-	342	1 867
	5 835	**99**	**397**	**1 245**	**7 576**

2021

	Emoluments	Allowances	Leave	Bonus	Total
Ms L Manamela Interim Chief Executive Officer	1 856	24	-	432	2 312
Ms L Ramaotsoa-Acting Chief Financial Officer	898	-	-	193	1 091
Dr AD Surridge	605	45	43	383	1 076
Dr T Mali Interim Chief Executive Officer	-	-	-	451	451
Dr M Bipath	1 409	84	-	487	1 980
Mr D Mahuma	1 543	24	-	221	1 788
Mr B Bredenkamp	1 469	24	-	487	1 980
	7 780	**201**	**43**	**2 654**	**10 678**

SANEDI operates on a cost to company system, employees contributions to the provident and other benefit funds are allocated from the overall cost to company. Bonuses paid in the 2020/21 financial year relate to both the 2019/20 and 2020/21 financial years.

26. Going concern

The AFS have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business .

Notes to the Annual Financial Statements (continued)

	2022 R '000	2021 R '000

27. Events after the reporting date

There are no subsequent events as at 31 March 2022.

28. Fruitless and wasteful expenditure

	2022 R '000	2021 R '000
Opening balance	7	6
Opening balance	**7**	**6**
Add: Expenditure identified- current	-	6
Less: Amounts recoverable- current	-	(5)
Closing balance	**7**	**7**

The fruitless and wasteful expenditure in the prior year relates to travel costs.

29. Irregular expenditure

	2022 R '000	2021 R '000
Opening balance	1 793	1 793
Opening balance	**1 793**	**1 793**
Add: Irregular Expenditure- current	566	-
Closing balance	**2 359**	**1 793**

The irregular expenditure incurred was due to three quotes not obtained prior to award, being chosen, costs incurred outside of an expired contract, lowest bidder not being appointed and the minimum threshold for local content and production being less than the stipulated .

With regards to the irregular expenditure incurred on the minimum threshold for local content, a submission was made to National Treasury requesting condonation however the request was not approved. Management has subsequently performed a determination test through Internal Audit and a resubmission for condonation is contemplated. None of the irregular condonation has been made to date.

Incidents/cases identified/reported in the current year include those listed below:

	2022 R '000	2021 R '000
Minimum threshold percentage for local production and content less than prescribed.	566	-

30. Segment information General information Identification of segments

The entity is organised and reports to Management on the basis of three major functional areas:

Primary, secondary and tertiary educational services. The segments were organised around the type of service delivered and the target market. Management uses these same segments for determining strategic objectives. Segments were aggregated for reporting purposes.

Information reported about these segments is used by Management as a basis for evaluating the segments' performances and for making decisions about the allocation of resources. The disclosure of information about these segments is also considered appropriate for external reporting purposes.

Reportable segments are actual segments which are reported on in the segment report. They are the segments identified above or alternatively an aggregation of two or more of those segments where the aggregation criteria are met.

Notes to the Annual Financial Statements (continued)

The entity operates in a single segment as budgets are not centralised into regional acivities. Refer to both the Statement of Financial Position as at 31 March 2022 and the Statement of Financial Performance for the year-ended 31 March 2022.

The entity operates in a single segment as budgets are not centralised into regional acivities. Refer to both the Statement of Financial Position as at 31 March 2022 and the Statement of Financial Performance for the year-ended 31 March 2022.

Types of goods and/or services by segment

31. Research and Development

Information about geographical areas

The entity's operations are in the Gauteng Province.

32. B-BBEE Performance

Information on compliance with the B-BBEE Act is included in the annual report under the section titled B-BBEE Compliance Performance Information.

NOTES:

sanedi

South African National Energy Development Institute

A State owned entity established under Section 7 of the National Energy Act, 2008 (Act No. 34 of 2008)

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