

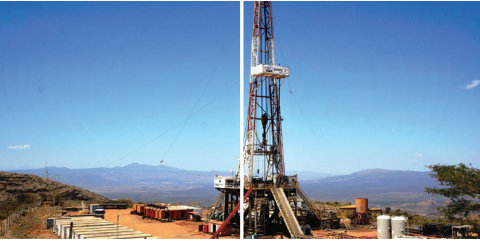


MINISTRY OF ENERGY
AND PETROLEUM



GEOHERMAL DEVELOPMENT COMPANY STRATEGIC PLAN

2023 - 2027







VISION

The Leading Geothermal Resource Developer

MISSION

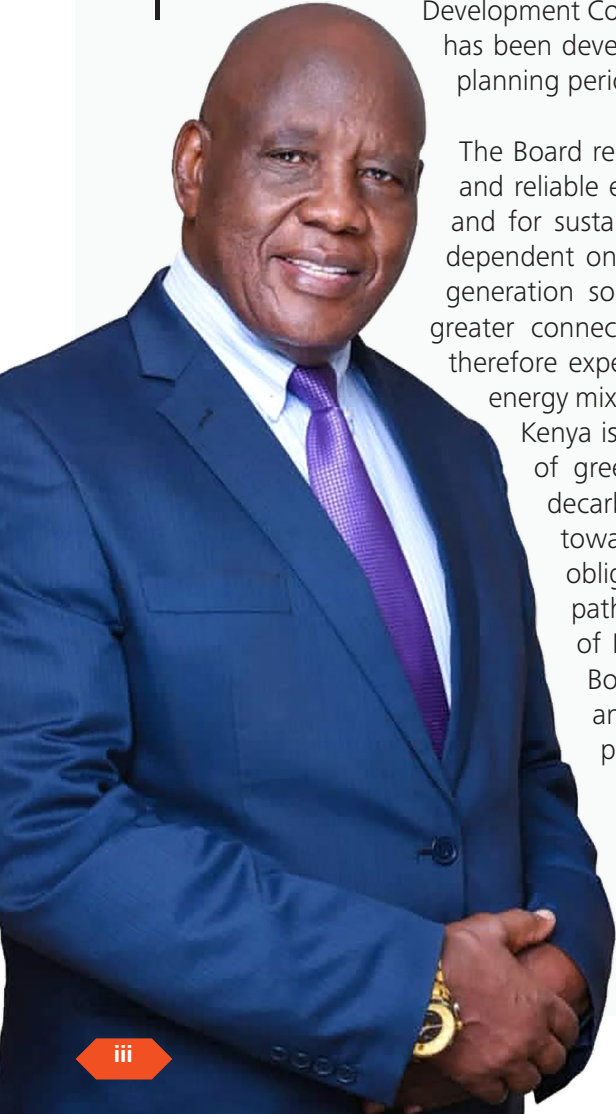
To contribute to lowering the cost of energy in Kenya by fast-tracking the development of geothermal resources

CORE VALUES

- Integrity
- Professionalism
- Teamwork
- Innovativeness
- Excellence

Foreword

I am delighted to unveil and present to our shareholders and stakeholders the Geothermal Development Company (GDC) Strategic Plan for 2023-2027. This Plan has been developed to provide strategic direction for GDC for the planning period.



The Board recognises that access to clean, adequate, affordable, and reliable energy is essential to meet the goals of Vision 2030 and for sustainable development. Realization of this goal is also dependent on a robust transmission system to connect the main generation sources to the major load centres and to allow for greater connectivity to regional resources. Geothermal power is therefore expected to continue playing a key role in the national energy mix by providing base load power. It is not lost on us that Kenya is determined to increase development and utilization of green energy towards a net-zero grid and ultimately decarbonisation. Geothermal energy plays a pivotal role towards fulfilling this fundamental national and global obligation and his strategic Plan aptly sets Kenya on that path. The Plan further coincides with the implementation of Medium-Term Plan (MTP IV) which incorporates the Bottom-up Economic Transformation Agenda (BETA) and energy is a key enabler that supports all the five (5) pillars of BETA.

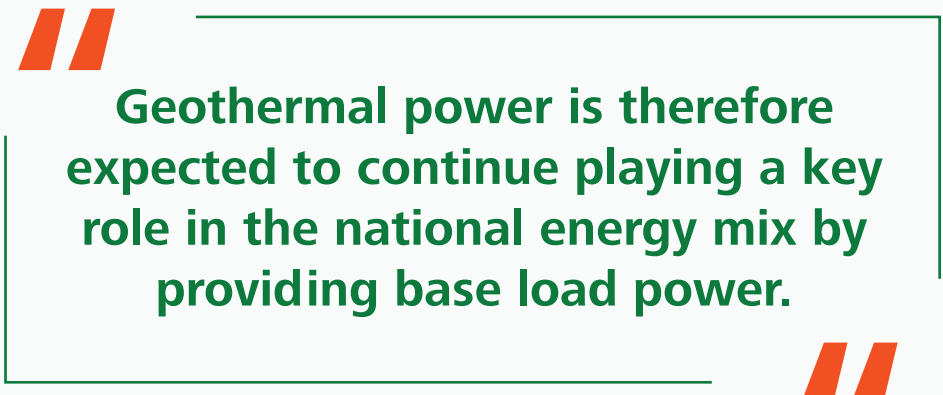
The Plan builds on the Company's achievements considering the challenges experienced and lessons learned. Notable milestones have been achieved in the development and management of geothermal resources. It is our commitment to avail geothermal

steam and heat thus contributing to lowering the cost of energy in Kenya. It is our strong persuasion that we add value to the shareholders and equally reengineer GDC to seek financial sustainability. This aspiration will be achieved through innovativeness, increased efficiency, sound corporate governance and excellence in our operations.

It is my Board's view that the interventions advanced in this Plan align well with the overarching policy objective of the Government to enable Kenya to move towards a just, clean energy transition and usher in a period of green transformation of its economy.

The Board of Directors pledge their commitment to the realization of the goals and objectives set out in this plan. I look forward to continued collaboration from all our stakeholders and partners in order to realize our Vision of *"The Leading Geothermal Resource Developer"*

Hon. Walter Nyambati
Chairman, Board of Directors

A graphic element consisting of a green rectangular border with orange double-slash marks at the top-left and bottom-right corners, framing the quote text.

Geothermal power is therefore expected to continue playing a key role in the national energy mix by providing base load power.

Preface and Acknowledgement

It is fair to say that Kenya is on the cusp of a geothermal revolution. This Fourth Cycle of the GDC Strategic Plan 2023-2027 is one of bold aspirations and possibilities that are set to amply transform GDC and the country. Anchored on the theme "Driving Kenya's green growth by fast-tracking the development of geothermal resources", the Plan is designed to robustly reconfigure Kenya's geothermal economy through innovative development of bankable geothermal projects while setting GDC on the path to financial sustainability. This Plan is a carefully distilled aggregate of the general sentiments, insights, and foresights of a multiplicity of stakeholders acquired through a rigorous consultative process.

It's the rigor, that included review of the previous strategic plan, public participation, and days of intense brainstorming, that ultimately helped us arrive at this critical framework. At the core of this plan are four Key Results Areas (KRAs): 1. Geothermal Resource Development and Management; 2. Financial Sustainability; 3. Stakeholder Management; and 4. Organizational Capacity.

We have refined and recast our mission and vision for focus and alignment with the strategic aspirations of the plan. Our new vision is: The Leading Geothermal Resource Developer while the Mission is "To contribute to lowering the cost of energy in Kenya by fast-tracking the development of geothermal resources". The Mission and Vision remain our polestar in our endeavour to implement the plan. The Company will be guided by the core values of integrity, professionalism, teamwork, innovativeness, and excellence.

The Plan faithfully pays heed to key local and global frameworks and aspirations including Bottom-Up Economic Transformation Agenda (BETA), Kenya Vision 2030, Agenda 2063, and the United Nations Sustainable Development Goals (SDGs) among others.

We are privileged to roll out a new Plan at a time when GDC has registered remarkable milestones. Our invaluable experience establishes a perfect launch pad to thrust us into the next exciting phase.

The journey into the future will be an enterprise in futility without people. Therefore, to succeed, our staff and other partners are fully entrenched in this plan. I wish to invite all our esteemed stakeholders to rise to the occasion and seize this unique moment, in the spirit of Together We Can, to deliver and retain GDC's pole position as the leader in geothermal development.

Lastly, I wish to thank the people who worked tirelessly to produce this plan. First it is the Board of Directors for their invaluable insights. Secondly, the Kenya School of Government (KSG) consultants who patiently and expertly midwived the ideas, and finally I wish to pay special tribute to the GDC Strategic Plan Committee that burned the midnight oil to produce this Plan from scratch to a workable blueprint that we are all proud of. To you all, thank you.

Mr. Paul K. Ngugi
Managing Director and CEO

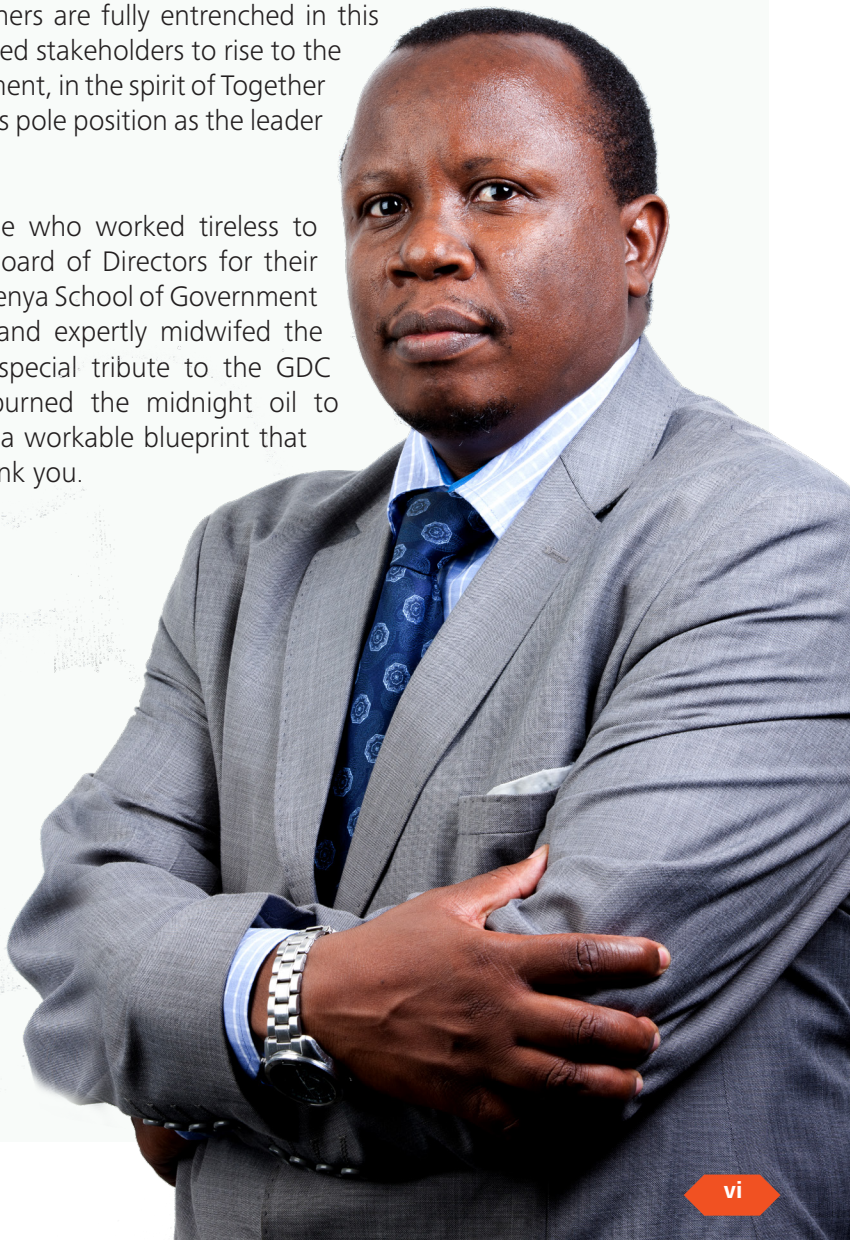


Table of Contents

FOREWORD	III
PREFACE AND ACKNOWLEDGEMENT	V
LIST OF TABLES	X
LIST OF FIGURES	XI
CONCEPTS AND TERMINOLOGIES	XII
ACRONYMS AND ABBREVIATIONS	XVI
EXECUTIVE SUMMARY	XXI
CHAPTER ONE: INTRODUCTION	2
1.0 Overview	2
1.1 The Context of Strategic Planning	2
1.1.1 United Nations 2030 Agenda for Sustainable Development	4
1.1.2 African Union Agenda 2063	4
1.1.3 East Africa Community (EAC) Vision 2050	5
1.1.4 Constitution of Kenya, 2010	6
1.1.5 Kenya Vision 2030, Bottom-up Economic Transformation Agenda and Fourth Medium Term Plan (MTP IV)	6
1.2.5.1 Role of GDC in the Bottom-up Economic Transformation Agenda (BETA), Kenya Vision 2030 and MTP IV	7
1.1.6 Sector Policies and Law	8
1.2 History of GDC	13
1.3 Methodology of Developing the Strategic Plan	14

CHAPTER TWO: STRATEGIC DIRECTION	17
1.4 Mandate and Functions	18
1.5 Vision Statement	18
1.6 Mission Statement	18
1.7 Strategic Goals	19
1.8 Core Values	19
1.9 Motto	20
1.10 Quality Policy Statement	20
CHAPTER THREE: SITUATIONAL AND STAKEHOLDER ANALYSIS	21
3.0 Overview	22
3.1 Situational Analysis	22
3.1.1 External Environment	22
3.1.1.1 Macro-environment	22
3.1.1.2 Micro-Environment	22
3.1.1.3 Industry Environment	22
3.1.2 Summary of Opportunities and Threats	22
3.1.3 Internal Environment	26
3.1.4 Summary of Strengths and Weaknesses	26
3.1.5 Analysis of 2018 – 2022 Strategic Plan Performance	27
3.1.5.1 Key Achievements	27
3.1.5.2 Challenges faced during implementation of the 2018-2022 Strategic Plan	29
3.2 Stakeholder Analysis	31
CHAPTER FOUR: STRATEGIC ISSUES, GOALS AND KEY RESULT AREAS	41
4.1 Overview	42
4.2 Strategic Issues	42
4.3 Strategic Goals	44
4.4 Key Result Areas (KRAs)	44

CHAPTER FIVE: STRATEGIC OBJECTIVES AND STRATEGIES	47
5.0 Overview	48
5.1 Strategic Objectives	48
5.2 Strategic Choices	51
5.3 Strategic Assumptions	52
CHAPTER SIX: IMPLEMENTATION AND COORDINATION FRAMEWORK	55
6.0 Overview	56
6.1 Implementation Plan	56
6.2 Coordination Framework	56
6.3 Risk Management Framework	61
CHAPTER SEVEN: RESOURCE REQUIREMENTS AND MOBILIZATION STRATEGIES	63
7.0 Overview	64
7.1 Financial Requirements	65
7.2 Resource Mobilization Strategies	66
7.3 Resource Management	67
CHAPTER EIGHT: MONITORING, EVALUATION AND REPORTING FRAMEWORK	69
8.1 Overview	70
8.2 Monitoring Framework	70
8.3 Performance Standards	71
8.4 Evaluation Framework	71
8.5 Reporting Framework and Feedback Mechanism	72
APPENDIX I: STRATEGIC PLANNING COMMITTEE	73

List of Tables

Table 1.1:	Other International and Regional Obligations and Conventions	11
Table 3.5:	Summary of opportunities and threats	23
Table 3.9:	Summary of strengths and weaknesses	27
Table 3.10:	Achievement per Thematic Areas	28
Table 3.12:	Lessons learnt	29
Table 3.13:	Stakeholder Analysis	31
Table 4.1:	Strategic Issues, goals and KRAs	46
Table 5.1:	Outcomes annual projections	48
Table 5.2:	Strategic Objectives nas Strategies	51
Table 7.1:	Financial Requirements for Implementing the Strategic Plan	65
Table 7.2:	Resource Gaps	66

List of Figures

Figure 1 : GDC Organizational Structure





Concepts and Terminologies

Appraisal wells	Step out wells drilled after discovery of steam to ascertain or define the extent of the resource
Captive power	Electricity generated by an industrial or commercial energy user for their own energy consumption
Carbon credits	Permits granted to a country, company, etc., for reducing emissions of carbon dioxide or other greenhouse gases
Carbon emissions	Production and discharge of greenhouse gases into the atmosphere
Clean climate financing	Financial resources and instruments that are used to support action on climate change
Clean Development Mechanism	Cooperative mechanism established under the Kyoto Protocol on implementation of an emission-reduction to assist developing countries achieve sustainable development by promoting environmentally friendly investment from industrialized country governments and businesses
Clean energy	Energy that comes from zero emission sources/sources that do not release air pollutants
Coil tubing	A continuous length of metal or composite tubing with no joints. It is long and flexible spooled on a large reel
Concessionary financing	Below market rate finance provided by major financial institutions, such as development banks and multilateral funds, to developing countries to accelerate development of geothermal resources
Direct use	The use of geothermal resources for alternative use other than for electricity generation
Environmental Social Impact Assessment	Prior scientific foreseeable analysis of potential effects of an activity on the environment and social conditions, and which addresses certain issues
Exploration	Prior examination of the geothermal potential of a field by use of non-invasive scientific methods and invasive drilling technology

Fossil fuels	Hydrocarbon containing material such as coal, oil, and natural gas, formed naturally in the Earth's crust from the remains of dead plants and animals that is extracted and burned as fuel
Geo-hazard monitoring	Use of various techniques to monitor hazards associated with volcanic or hydrothermal activities
Geothermal blocks	Defined geothermal development areas
Geothermal fields	Locations on the earth surface containing geothermal resources
Geothermal resource assessment	Investigations/studies carried out to determine the presence and quantities of geothermal resources
Geothermal resources	Reservoirs inside the earth from which heat can be extracted economically and utilized for generating electric power or other suitable industrial, agricultural, or domestic applications
Net zero	Target of completely negating the amount of greenhouse gases produced by human activity to be achieved by reducing emissions and implementing methods of absorbing carbon-dioxide from the atmosphere
E-mobility	Electro-mobility that aims at decarbonizing the transport sector through energy supplied from electrical power sources hence moving away from CO-2emitting fossil fuels to create a cleaner, healthier, and more affordable future
Green energy	Energy that comes from renewable sources
Greenhouse gases	Gases that contribute to the greenhouse effect by absorbing infrared radiation e.g., carbon dioxide, methane etc.
Industrial parks	A section that is set aside, planned, and zoned for the purpose of industrial development
Make -up wells	Production wells drilled inside an already confirmed reservoir to maintain steam production in a certain level
Measurement while drilling	Logs done while the well is still being drilled and drill pipe is present in the borehole
Micro-seismic monitoring	A technique used to observe and analyze small-scale earthquakes or seismic waves that occur in the ground due to volcanic, hydrothermal, or geothermal activities/operations

Modular geothermal Power plant or Well head generating unit	Smaller sized geothermal power plant that can be commissioned on-site within a shorter period, in a matter of months
National grid	The network of high-voltage power lines between major power stations
Net zero power grid	Grid supplying zero emission electricity
Production drilling	Drilling of wells within a proven resource area for steam supply
Production wells	Geothermal wells that have been discharged
Proven steam fields	Geothermal fields where wells have been drilled and successfully discharged
Reinjection wells	Wells connected to a geothermal production area where waste fluids are pumped back to support the reservoir/geothermal system.
Renewable energy	Energy derived from sources that are naturally replenished
Reservoir management	The process of optimizing the exploitation of geothermal resources while ensuring the longevity of the reservoir through monitoring and implementation of appropriate actions
Development models	Structured way to bring about growth used by economists according to their perception of the economic, social and political condition of a country
Social licenses	Perception of local stakeholders that a project in a region is socially accepted or legitimate
Special economic zones	An area in a country designed to generate positive economic growth
Steam gathering system	Pipes and connections that facilitate channeling of steam from one or more wells to a utilization facility such as a power plant
Surface exploration	Studies carried out to assess the geothermal potential of a prospect
Tracer and interference testing	The use of inert chemicals (tracers) and pressure data to understand the connectivity between wells, that's, inter-well communication, and reservoir permeability
Upfront costs	'Upstream'/initial investments required to discover geothermal resources
Upfront risks	'Upstream' risks associated with discovering geothermal resources e.g., exploration and drilling risks

Well interventions	Operations carried out to induce or optimize well output, prevent premature failures, and extend the lifespan of geothermal wells
Well logging	A record of information about the geologic formations/temperature and pressure conditions penetrated by a borehole/well
Well productivity	The energy capacity of a well (from steam or brine discharge)
Well siting	The process of integrating available data to identify suitable sites and targets for drilling productive wells
Well testing	Discharging a well to enable carry out measurements that provide information on its physical and chemical characteristics
Zero Stock	Strategy centered on reducing inventory to cut the cost overruns in the warehouse



Acronyms and Abbreviations

ADR	- Alternative Dispute Resolution
AGCE-IPCU	- Africa Geothermal Centre of Excellence - Interim Project Coordination Unit
BCG	- Geological Bureau of Comoros
BETA	- Bottom-Up Economic Transformation Agenda
BOP	- Blow Out Preventer
CCM	- Corporate Communications and Marketing
CDM	- Clean Development Mechanism
CDPs	- Condensate Drain Ports
CIPU	- Critical Infrastructure Protection Unit
Covid-19	- Corona Virus Disease
CPs	- Conditions Precedent
CSOs	- Civil Society Organizations
CPS	- Corporate Planning and Strategy
CR	- Community Relations
CSR	- Corporate Social Responsibility
CTU	- Coil Tubing Unit
DEM	- Drilling Equipment Maintenance
DU	- Direct Use
DO	- Drilling Operations
EAC	- East Africa Community
EGS	- Enhanced Geothermal Systems
EMP	- Environmental Management Program
EoI	- Expression of Interest
EPRA	- Energy and Petroleum Regulatory Authority

ERM	- Enterprise Risk Management
ERP	- Enterprise Resource Planning
ESG	- Environmental, Social and Governance
ESIA	- Environmental and Social Impact Assessment
ESMP	- Environmental and Social Management Plan
EV	- Electric Mobility
ExCOM	- Executive Committee
FIN	- Finance
GCE	- Geothermal Centre for Excellence
GDC	- Geothermal Development Company
GHG	- Greenhouse gases
GoK	- Government of Kenya
GRA	- Geothermal Resource Assessment
GRD	- Geothermal Resource Development
GRM	- Geothermal Resource Management
GRMF	- Geothermal Risk Mitigation Facility
GRO-GTP	- GRO Graduate Training Program
HS	- Hydrogen Strategy
HRD	- Human Resource Development
HRS	- Human Resource Services
ICT	- Information Communication Technology
IOT	- Internet of Things
IPPs	- Independent Power Producers
JICA	- Japan International Cooperation Agency
JV	- Joint Venture
KAM	- Kenya Association of Manufacturers
KenGen	- Kenya Electricity Generating Company PLC

KETRACO	- Kenya Electricity Transmission Company
KNCCI	- Kenya National Chamber of Commerce and Industry
KPLC	- Kenya Power and Lighting Company PLC
KRA	- Kenya Revenue Authority
KRA	- Key Result Areas
LCPDP	- Least Cost Power Development Plan
LoS	- Letter of Support
LS	- Legal Services
MEMD-Uganda	- Ministry of Energy and Mineral Development
M&E	- Monitoring and Evaluation
MOEP	- Ministry of Energy and Petroleum
MSMEs	- Micro, Small and Medium Enterprise
MTP IV	- Fourth Medium Term Plan
MW	- Megawatts
NDC	- Nationally Determined Contribution
NEMA	- National Environment Management Authority
NGAO	- National Government Administration Officers
NITA	- National Industrial Training Authority
NLC	- National Land Commission
NOCK	- National Oil Corporation of Kenya
O&M	- Operations and Maintenance
ODDEG	- Office of Djiboutian Geothermal Energy Development
OSHA	- Occupational Safety and Health Administration
PC	- Performance Contract
PISSA	- Project Implementation Steam Supply Agreement
PMS	- Performance Management System
PMT	- Project Management

PPADA	- Public Procurement and Asset Disposal Act, 2015
PPAs	- Power Purchase Agreements
PRG	- Partial Risk Guarantee
PV	- Photovoltaic
R&I	- Research and Innovation
RPM	- Rotations Per Minute
SAP	- Systems Applications and Products
SDGs	- Sustainable Developments Goals
SEZ	- Special Economic Zones
SHE	- Safety, Health and Environment
SMGPL	- Sosian Menengai Geothermal Power Limited
TGH	- Thermal Gradient Holes
TIA	- Training Impact Assessment
TMGO	- Tulu Moyo Geothermal Operation
TNA	- Training Needs Assessment
UNFCCC	- United Nations Framework Convention on Climate Change
WARMA	- Water Resources Management Authority
WTO	- World Trade Organization

Executive Summary

This Strategic Plan provides direction for Geothermal Development Company (GDC) and defines priorities that the Company will pursue for the plan period 2023 - 2027. The Plan is aligned with the National, Regional, International and other development priorities and has been developed through a consultative process involving both internal and external stakeholders. This strategic plan is premised on the vision of becoming “The Leading Geothermal Resource Developer”, with the mission “To contribute to lowering the cost of energy in Kenya by fast-tracking the development of geothermal resources”. The Company will be guided by the core values of integrity, professionalism, teamwork, innovativeness and excellence. The Plan is organized into eight chapters as follows:

Chapter One presents the context of strategic planning with a comprehensive description of the Company’s contribution to the relevant global, regional and national policy, legal and regulatory frameworks.

Chapter Two provides the strategic direction for GDC that includes the mandate, vision, mission, strategic goals, core values, and quality policy statement.

Chapter Three presents the situational analysis focusing on the external and internal environments within which GDC operates. An analysis of past performance from the 2018 -2022 strategic plan as well as stakeholder analysis is also provided.

Chapter Four outlines the strategic issues that the Company seeks to address during the plan period, the goals to be realised and the key result areas linked to the attainment of the strategic goals. The Company will pursue the following four Key Result Areas (KRAs) during the plan period: Geothermal resource development and management; Financial sustainability, Stakeholder management and Organizational capacity.

Chapter Five presents the strategic objectives and strategies for the 2023 – 2027 plan period, with a focus on the outcomes annual projections and strategic choices to be pursued in order to achieve the identified strategic objectives. The Key Result Areas shall be realised through six

(6) strategic objectives as follows:

- a) To accelerate geothermal resource development;
- b) To exploit other geothermal resource potentials;
- c) To contribute to climate change mitigation and adaptation efforts;
- d) To mobilize financial resources;
- e) To strengthen corporate brand reputation; and
- f) To strengthen the Company's institutional framework.

Chapter Six outlines the implementation and coordination framework for operationalizing the strategic plan. It comprises of the action plan, annual work plan and coordination framework to support implementation of the plan. Further, the chapter provides the risk management framework.

Chapter Seven presents the financial resource requirements for implementing the strategic plan, sources of funds, resource gaps, resource mobilization strategies and resource management.

Chapter Eight highlights the monitoring, evaluation and reporting framework to facilitate tracking implementation of the Plan.



CHAPTER ONE

Introduction

1.0 Overview

Strategy provides a clear direction and purpose, guiding the decisions and actions of an organization. The development of the 2023 – 2027 Strategic Plan for GDC provides a roadmap of how the Company intends to move from where it is now towards its vision in accordance with its mission and values. In so doing it plans to use its strengths to take advantage of opportunities, remedy its weaknesses and to avoid or mitigate threats. The plan also defines how the Company will measure progress in meeting its objectives and evaluate the results. It is expected that the implementation of the strategies identified in the 2023 – 2027 Strategic Plan will not only improve the performance of the Company but also enhance sustainable economic growth and transformation.

1.1 The Context of Strategic Planning

This Strategic Plan has been developed in consideration of national development priorities, regional and international development frameworks.

1.1.1 United Nations 2030 Agenda for Sustainable Development

The United Nations 2030 Agenda for Sustainable Development adopted by all United Nations Member States in 2015 provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. The Government of Kenya is committed to the attainment of the United Nations Sustainable Developments Goals (SDGs) as adopted by the United Nations General Assembly. The development of this strategic plan has outlined the Company’s commitment to the attainment of the following goals which are mainstreamed in the development of geothermal resources:



Goal 5: Achieve gender equality and empower all women and girls

Target 5.5 aims at ensuring women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life. This goal is further expounded through Target 5.c which is to adopt and strengthen policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

GDC has ensured compliance to the two third (2/3) gender rule in Article 27 (8) of the Constitution of Kenya 2010. It has further developed two (2) gender policies (Gender Mainstreaming Policy and Sexual Gender Based Violence policy), with committees and focal points to ensure its compliance and implementation. GDC will also undertake continual capacity building on gender mainstreaming.



Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Target 7.2 seeks to increase substantially the share of renewable energy in the global energy mix while Target 7.b seeks to expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, Small Island developing States, and land-locked developing countries, in accordance with their respective programmes of support by 2030.

GDC will contribute towards increasing the amount of affordable, renewable energy to the national grid and a net zero power grid in Kenya by 2030.



Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.4 seeks to upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities by 2030. Additionally, Target 9.5 aims to enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending by 2030.

GDC's adoption of direct use technology will contribute to the replacement of the use of fossil fuels thus reducing carbon emissions in industries. The development of GDC's Centre for Excellence encompasses capacity development, research and innovation with regard to geothermal resources and technologies. This extends to the direct use of geothermal technologies which also impacts industries.



Goal 13: Take urgent action to combat climate change and its impacts

Target 13.2 seeks to integrate climate change measures into national policies, strategies and planning. GDC's development of geothermal resources will contribute to replacement of the use of fossil fuels sources of power in the national grid.

1.1.2 African Union Agenda 2063

The Agenda 2063 is a collective vision and roadmap for social economic transformation of the continent that is anchored on seven aspirations. GDC will contribute to the Agenda 2063 through the development of geothermal energy first as Africa's natural resource and second a reliable source of energy towards the achievement of the AU's aspiration of sustainable development and provision of modernized infrastructure including access to affordable energy. The development of geothermal energy by GDC will also contribute to achievement of the Agenda 2063 of high standards of living, quality of life, science, technology, and innovation, and transformed economies. The development of geothermal energy will also contribute towards modern agriculture through direct uses of geothermal heat, job creation and capacity building of Africa's human capital.

1.1.3 East Africa Community (EAC) Vision 2050

The rationale for EAC Vision 2050 is to provide a catalyst for the region to enhance transformation, growth and development to propel the community to a higher income cohort and subsequently achieve an upper middle-income status.

The EAC Vision 2050 identifies energy as a key growth driver in the manufacturing sector in the region. The energy sector in the region faces various challenges which include weak power transmission and distribution infrastructure, high cost of power, low per-capita power consumption and electricity access. Increased investment in the sector will ensure availability of sufficient and reliable electricity and increased access to electricity.

The objective of the energy sector development for Vision 2050 will be to ensure sustainable, adequate, affordable, competitive, secure and reliable supply of energy to meet regional needs at the least cost, while protecting and conserving the environment. The Vision outlines that effort will be made to invest in hydro, geothermal, natural gas, biomass, wind, solar and nuclear. For the industrialization and manufacturing to sprout in the region, the key drivers to be put in place include: Energy supply to power industries and manufacturing sectors and Investment in power generation beyond hydro-energy.

GDC will play a major role in the development and delivery of competitively priced geothermal power and its alternative uses.

1.1.4 Constitution of Kenya, 2010

GDC recognizes the Constitution of Kenya as the Supreme Law which binds all persons and all State Organs. The Company commits to respect, uphold and defend the Constitution and identifies the following provisions as directly affecting the exercise of its statutory mandate as well as day to day operational activities:

- a) **Article 6 (2) & (3)** – Devolution and Access to services;
- b) **Article 10 (1)(2)** – The national values and principles of governance;
- c) **Article 20 (4) (a)** – Application of Bill of rights;
- d) **Article 21(3)** – Address the needs of vulnerable groups within and without the Authority including women, persons with disabilities, children, youth, members of minority or marginalised communities and members of particular ethnic, religious or cultural communities;
- e) **Article 27**– Equality and freedom from discrimination;
- f) **Article 35(1)** – Access to information;
- g) **Article 41** – Labour relations;
- h) **Article 42 (a & b)** - Environment;
- i) **Article 43 1 (a)** - every person has the right to the highest attainable standard of health, which includes the right to health care services;
- j) (c) Under the Bill of Rights, the Constitution stipulates that “every person has the right to be free from hunger and to have adequate food of acceptable quality”. 2-A person shall not be denied emergency medical treatment;
- k) **Article 46** – Consumer rights;
- l) **Article 50(c)** - Minorities and Marginalized groups;
- m) **Article 60 (1) (c)** emphasizes sustainable and productive management of land resources;
- n) **Article 69 (1) (a)** ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits; (b) - stresses the achievement and maintenance of at least 10% tree cover of the land area of Kenya;
- o) **Chapter Six** – Leadership and integrity;
- p) **Article 201** – Principles of public finance;
- q) **Article 227** – Procurement of public goods and services; and
- r) **Article 232** – Values and principles of public service.

1.1.5 Kenya Vision 2030, Bottom-up Economic Transformation Agenda and Fourth Medium Term Plan (MTP IV)

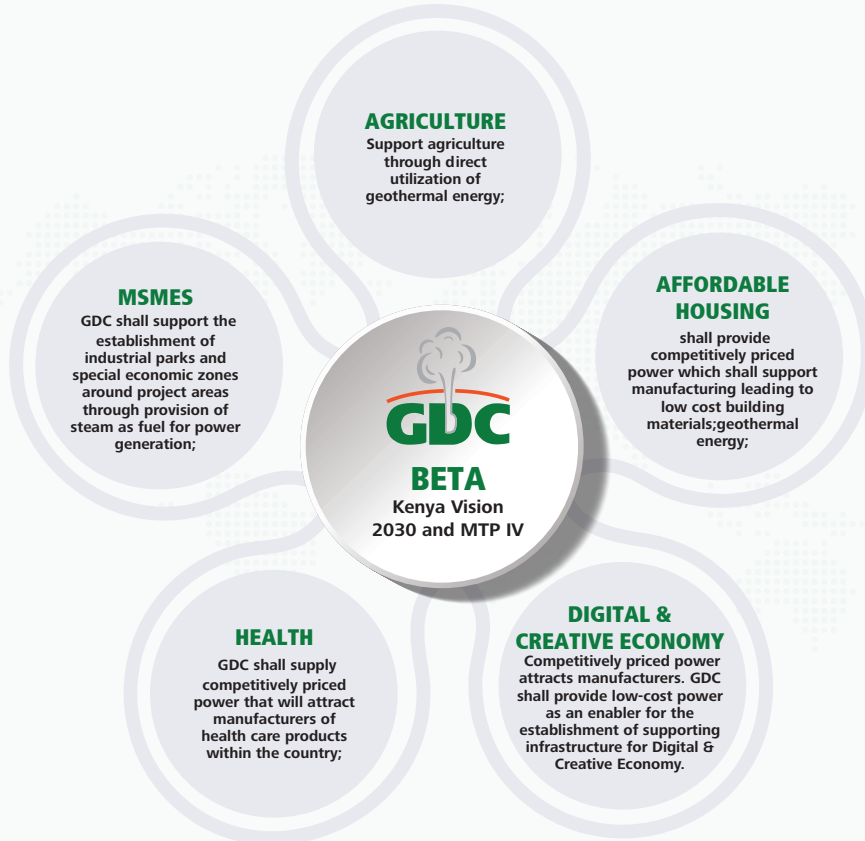
The Kenya Vision 2030 articulates the national development agenda for the country and outlines the process of transforming Kenya into a newly-industrialized middle-income country. It envisions a high quality of life for all citizens by the year 2030 in a clean and secure environment. The Vision is anchored on three pillars; Economic, Social, and Political and is implemented through successive five-year Medium-Term Plans.

MTP IV focuses on implementation of strategic interventions aimed at driving Kenya's economy towards a sustainable growth path through its five sectors namely Finance and Production, Infrastructure, Social, Environment and Natural Resources, and Governance and Public Administration. The Plan has adopted the theme 'Bottom-up Economic Transformation Agenda for Inclusive Growth' which is anchored on five core government pillars that are expected to have the highest impact at the bottom of the economy. These are: Agricultural Transformation and Inclusive Growth; transforming the Micro, Small and Medium Enterprise (MSMEs) Economy; Housing and Settlement; Healthcare; and Digital Superhighway and Creative Economy. The MTP IV will implement the Kenya Kwanza Bottom-Up Economic Transformation Agenda (BETA) that will drive the economic turnaround and inclusive growth agenda for Kenya.



1.2.5.1 Role of GDC in the Bottom-up Economic Transformation Agenda (BETA), Kenya Vision 2030 and MTP IV

Energy is a key enabler that supports all the five (5) pillars of the Bottom-up Economic Transformation Agenda (BETA). These are: Agriculture, MSMEs, Affordable Housing, Healthcare and Digital & Creative Economy. GDC's contribution to the five pillars is as follows:



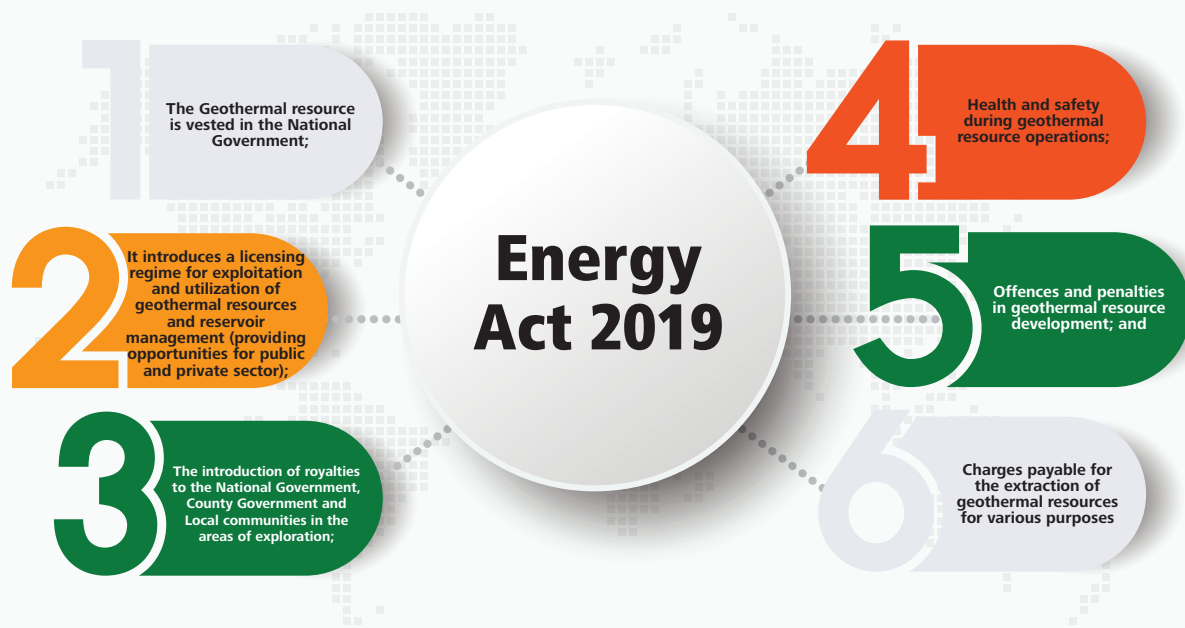
GDC shall align to the Economic pillar of the Kenya Vision 2030 where exploitation of geothermal has been identified as among the new sources of energy. Further, GDC shall encourage the entry of Private investors.

1.1.6 Sector Policies and Law

The Plan further aligns to sector specific policies, laws, international treaties and conventions which have direct impact on the operations of the Company:

a) Energy Act 2019

The following are the key highlights of the Act pertaining to the exploitation of geothermal resources and which GDC shall integrate in its activities:



b) Least Cost Power Development Plan (LCPDP)2022-2041

The LCPDP 2022-2041 recognizes the role that geothermal power plays in the national energy mix by providing base load power. It therefore commits to accelerate adoption of flexible geothermal technologies in future generation expansion to increase system flexibility and manage venting of steam.

c) Energy Policy, 2018

The Energy Policy stipulates the processes and guidelines that will be used in the development and exploitation of geothermal resources, including the laws anchoring these processes. The following are some of the commitments embedded in the policy and which will support GDCs mandate:

- i. The Government shall continue to support and fund geothermal resource assessment and development so as to manage the geothermal exploration risk and attract investors;
- ii. Promote research, development and capacity building for geothermal development by providing fiscal and other incentives;
- iii. Streamline licensing and allocation of geothermal blocks with incentives and sanctions in order to accelerate geothermal development;
- iv. The government to package incentives through attractive pricing to promote and encourage direct uses of geothermal resources such as utilization of heat, water, gases and minerals;
- v. The government to enforce compliance with the regulatory requirement to utilize the best available technologies that optimize the resource and conserve the reservoir; and
- vi. Promote early geothermal generation through implementation of efficient modular geothermal technologies.

d) Kenya Climate Change Act, 2016

The Kenya Climate Change Act, 2016 was enacted to facilitate effective response to climate change and provide a vision for a low carbon and climate resilient development trajectory. The Act requires all national governments and public entities to integrate the climate change action plan into sectoral strategies, action plans and other implementation projections for the assigned legislative and policy functions.

Kenya has adopted a green energy strategy in expanding its generation with an emphasis on renewable sources such as geothermal, hydro, wind and solar; this creates a critical role in moving Kenya towards a green economy trajectory. GDC will contribute to the development of renewable energy in the country through the development of 1,065MW of renewable geothermal sources by 2030.

e) **Kenya National Climate Change Policy, 2021**

The Kenya National Climate Change Policy focuses on the interlinkage between sustainable development and climate change. Climate change adversely impacts geothermal development and therefore the need for intervening measures that can help to achieve the goal of low carbon climate resilient development. GDC will put in place appropriate mechanisms to transition to low carbon growth while developing the renewable resources. These include putting in place a unit to fulfil actions required to address climate change. The unit will guide policy and functional implementation of climate change and exploit emerging opportunities.

f) **Land Act, 2012**

The Land Act of 2012 gives effect to Chapter 5 of the Constitution of Kenya, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land-based resources, and for connected purposes. GDC will collaborate with other government agencies to facilitate access to land for geothermal resource development.



g) **Competition Act No.12 of 2010**

GDC is cognizant of the Competition Act No.12 of 2010 which was enacted to promote and safeguard competition in the national economy; to protect consumers from unfair and misleading market conduct. Article 5- Application- "...shall apply to all persons including the Government, state corporations and local authorities in so far as they engage in trade.

h) **Factories Act Cap 514**

Facilities are categorized as workplace. GDC shall comply with all the relevant provisions of the Factories Act Cap 514.

i) **Environmental Management and Co-ordination Act No. 8 of 1999**

The Act establishes NEMA. Projects fall under second schedule: Projects to undergo EIA category four (Dams, rivers and water resources) including drilling for the purpose of utilizing ground water resources including geothermal resources. GDC shall comply with all relevant provisions of the Environmental Management and Co-ordination Act No. 8 of 1999.

j) Forest Conservation and Management Act No. 34 of 2016

The Act establishes Kenya Forest Service Part IV: conservation and management of forests. Some projects of GDC are located in forested areas. GDC shall, therefore, comply with all relevant provisions within the Forest Conservation and Management Act No 34 of 2016.

k) Other International and Regional Obligations and Conventions

The Company is cognizant of the international and regional obligations to which Kenya as well as the Company has committed to. This Plan has thus taken into account the various international obligations and conventions which are embedded in its operations. These are summarized in table 1.1.

Table 1.1: Other International and Regional Obligations and Conventions

Obligations an Conventions	Obligation	Relevance to GDC
United Nations Convention on Climate Change (UNFCC)	Dangerous human activities on the climate system	GDC complies through NEMA licensing, environmental management
Kyoto Protocol	Committing industrialized countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.	GDC geothermal projects reduce greenhouse gases (GHG) emissions
World Trade Organization (WTO)	Provides Global rules of trade between nations	GDC looking into green hydrogen trade with international countries

1.2 History of GDC

Geothermal Development Company (GDC) is a 100 percent state-owned company, which was formed pursuant to the enactment of the Energy Act No. 12 of 2006, after the adoption of Sessional Paper No. 4 on Energy in 2004 that unbundled the country's energy sector into five sub-sectors: generation, transmission, distribution, regulation and policy to ensure efficiency. GDC is in the generation sub-sector and is tasked with undertaking geothermal resource assessment including exploration, appraisal and production drilling in prospective areas. In addition, the company will be responsible for development and management of proven steam fields and sell steam to Kenya Electricity Generating Company PLC (KenGen) and IPPs.

GDC, which is placed under the Ministry of Energy and Petroleum, was incorporated in 2008 as a Special Purpose Vehicle (SPV) to fast-track the development of geothermal resources in the country. Soon after, the Company started to drill for steam in the Olkaria geothermal project. In 2010, the Company acquired its first two rigs and completed surface scientific studies in Menengai and started drilling operations. In 2011, GDC successfully discharged its first well at the Menengai project. In 2014, three IPPs were selected to put up 35-MW power plant each, for the Menengai 105 MW Project. In 2015, GDC rolled out and launched Direct Use Demonstration Projects in Menengai. The Projects include Geothermal Heated Green House, Geothermal Heated Aqua-ponds, Geothermal Heated Milk Pasteurizer, and a Geothermal Heated Laundromat.

In 2018 GDC completed construction of a 25 KM steam Gathering System in Menengai. In the year, GDC started drilling operations in the Baringo-Silali Geothermal Block. The company put in place water systems which run for 127 KM (water for drilling operations) and 162 KM (Water for community). In 2020, Sosian Menengai Power LTD started the construction of the first 35 MW Power plant in Menengai. In 2023 the first 35MW power plant started to generate power at the Menengai Geothermal Project.

1.3 Methodology of Developing the Strategic Plan

The 2023-2027 strategic plan of GDC was developed through a consultative and participatory process which involved the Board, management, staff and external stakeholders.

A detailed performance evaluation of the 2018-2022 Strategic Plan was undertaken to establish key achievements, challenges, lessons learnt and identified gaps that have been addressed in the 2023-2027 plan period. Strategic planning sessions were conducted with the Board, management and the strategic planning committee to provide more insight, generate agreements around the various strategic elements which guided and informed the strategic plan development. A final review and validation of the entire strategic plan was undertaken with internal stakeholders in readiness for stakeholders' validation. The Strategic Plan was subjected to stakeholders validation and finally, to the State Department for Economic Planning for review.





> 2008

GDC was incorporated.



> 2009

GDC opened its offices, recruited staff and started drilling in Olkaria.



> 2010

Acquired our first two rigs.



> 2011

Discharged the first well at Menengai, MW-01, proving the presence of steam in the field.



> 2016

Earned revenue from steam sales worth approximately Kes.3B from the Olkaria Geothermal Project in Naivasha.



> 2017

Kickstarted infrastructural works in the North Rift region in order to lay the foundation for the development of the Baringo Silali Geothermal Prospect.



> 2018

Completed the construction of a 25KM steam gathering system in Menengai.



> 2019

- Drilled Paka Well One (PW-01), the first well in the Baringo-Silali Geothermal field
- Began testing the steam gathering system for Menengai 105MW.

Milestones



2012

Struck a 30MW well at Menengai and acquired three additional drilling rigs.



2013

Feasibility study of the Menengai Geothermal Project was commissioned.



2014

Three IPPs were selected to each put up a 35-MW power plant for the Menengai 105 MW Project.



2015

Launched Direct Use pilot projects at Menengai which include a geothermal-heated milk pasturiser, geothermal-heated greenhouse, geothermal-heated aqua ponds and geothermal-heated laundromat.



2020

Sosian Menengai Power LTD started the construction of the first 35 MW powerplant in Menengai.



2021

GDC was ISO 9001:2015 certified.



2022

- Marked the completion of 14 wells in the Baringo-Silali Geothermal Project
- Ongoing power plant construction at the Menengai Geothermal Project.



2023

The first 35MW power plant started to generate power at the Menengai Geothermal Project.

CHAPTER TWO

Strategic Direction



1.4 Mandate and Functions

GDC's mandate as derived from the Sessional Paper No. 4 of 2004 and the Memorandum and Articles of Association is to undertake geothermal resource assessment including exploration, appraisal, and production drilling in prospective areas. In addition, the Company will be responsible for development and management of proven steam fields and sell steam to KenGen and IPPs. Further, GDC's mandate includes the development of direct utilization of geothermal heat, steam and water and also to undertake consultancy including providing advisory on geothermal energy. Specifically, GDC shall undertake the following functions:



1.5 Vision Statement

The Leading Geothermal Resource Developer

1.6 Mission Statement

To contribute to lowering the cost of energy in Kenya by fast-tracking the development of geothermal resources

1.7 Strategic Goals

The Company intends to achieve the following strategic goals during the strategic planning period in respect of the various strategic issues identified:

- a) Develop geothermal resources;
- b) Achieve financial sustainability;
- c) Build and sustain stakeholder partnerships and collaborations; and
- d) Improve performance and productivity.

1.8 Core Values

The pursuit of GDC's vision and mission shall be guided by core values which create a common sense of commitment and builds internal and external trust. The core values are:



1.9 **Motto**

Geothermal, Green Energy for Kenya

Slogan

Together We Can

1.10 **Quality Policy Statement**

Geothermal Development Company is committed to sustainable exploration and development of geothermal energy. We are committed to achieving improvements in the quality of our products and services by:



Endeavoring to meet stakeholder expectations;



Complying with statutory and regulatory requirements;



Communicating the policy to all stakeholders;



Reviewing and improving effectiveness of the quality management systems.

An aerial photograph of an oil drilling rig in a lush, green landscape. The rig is a tall, lattice-structured tower with various mechanical components at its base. The surrounding area is filled with dense vegetation and trees. The entire image is overlaid with a semi-transparent green filter.

CHAPTER THREE

Situational and Stakeholder Analysis

3.0 Overview

3.1 Situational Analysis

The situational analysis focusing on the external and internal environments within which GDC operates. An analysis of past performance from the 2018 -2022 strategic plan as well as stakeholder analysis is also provided.

3.1.1 External Environment

An analysis of GDC's external environment was undertaken to appreciate the implications of developments in the external environment as manifested in opportunities and/or threats.

3.1.1.1 Macro-environment

An analysis of the major external factors which have both direct and indirect impacts on the Company's decision making and performance was undertaken using PESTEL. Analysis of these factors will enable GDC to plan better and develop strategies to minimize the threats and maximize opportunities.

3.1.1. Micro-Environment

An analysis of GDC's immediate operating environment that affects access to resources was undertaken to understand how it affects implementation of the strategic objectives. The key variables examined were labour markets, trade unions, customer profiles, creditors and suppliers.

3.1.1.3 Industry Environment

An analysis of the industry environment factors was undertaken to understand the Industry in which GDC operates and their implication on strategy for the Company.

3.1.1.4 Market Environment Analysis

Market analysis was undertaken with a view to understanding the Company's customers. The market environment factors considered are important for the company to determine their strategic implications and subsequent response.

3.1.2 Summary of Opportunities and Threats

Based on the analysis of the external environment, a summary of opportunities and threats is provided in Table 3.5.

Table 3.5: Summary of opportunities and threats

Factor	Opportunities	Threats
Political	<ul style="list-style-type: none"> • Political goodwill for geothermal development • Government’s focus on the adoption of green technologies and commitment to Global drive to net zero • Commitment to provision of competitively priced energy • Drive towards industrialization • E-mobility policy • Government support for PPP financing framework • Political stability 	<ul style="list-style-type: none"> • Land disputes with local leadership • Changes in policies, guidelines, regulations • Competing interests between the different levels of Government • Political unrest • Political Influence
Economic	<ul style="list-style-type: none"> • Unexploited potential in alternative uses of geothermal (Direct use) • Growing and emerging industrial growth such as Electric Mobility (EV) • Green hydrogen production • Government’s commitment to reduce the cost of power • High cost of fossil fuel • Government policy towards decreasing dependency on expensive thermal plants • Goodwill from development partners • Demand for captive power development • Expansion in taxation • Employment creation 	<ul style="list-style-type: none"> • Location of industrial parks which are not ideal for market/ off-takers • Local economic decline • Increased cost of capital (High inflation rates, exchange rates, interest rates fluctuations) • Overreliance on steam sales • Exploration phase not attractive to private sector investors
Social	<ul style="list-style-type: none"> • Geothermal is positively perceived, 	<ul style="list-style-type: none"> • Potential resistance from host

	<ul style="list-style-type: none"> as clean energy • Attractive value chain of geothermal uses • Social license and community goodwill • Availability of labour 	<ul style="list-style-type: none"> communities • Community conflicts • Labour disputes • Land use restrictions • Vandalism of geothermal project infrastructure
Technological	<ul style="list-style-type: none"> • Available proven technology to exploit geothermal resources • Technological advancement in geothermal development • Increased interest in Green Hydrogen technology 	<ul style="list-style-type: none"> • Increased advancement and interest in competing energy technologies • Cyber attacks
Ecological	<ul style="list-style-type: none"> • Climate change- Continued preference for Green/renewable energy • Global pressure on all nations to set targets for net zero carbon emissions by 2050 • Abundance of geothermal resource in Kenya • Minimal ecological footprint 	<ul style="list-style-type: none"> • Natural decline and over exploitation of geothermal resources • Re-classification of geothermal prospect sites as protected areas • Unsustainable exploitation of geothermal resources • High cost of managing environmental impacts of projects
Legal	<ul style="list-style-type: none"> • Existing policy, legal and regulatory framework • Vision 2030 • International conventions and laws on climate change and mitigations 	<ul style="list-style-type: none"> • Change in government policies and priorities • Unfavourable adjudication of litigation • Lengthy resolution of cases • Litigations
Micro factors	<ul style="list-style-type: none"> • Availability of skilled labour • Industrial harmony with trade unions • Developed favourable employee 	<ul style="list-style-type: none"> • Limited specialised skills in the labour market • Limited availability of specific equipment locally

	<ul style="list-style-type: none"> policies • Strategic Partnerships and alliances • Access to concessionary financing • Creation of new business Opportunities 	<ul style="list-style-type: none"> • Disaccord with trade unions • Disputes and Litigation
Industry environment	<ul style="list-style-type: none"> • GDC's expertise in geothermal development and reservoir management • GDC's ownership of specialized equipment for geothermal development • Existing proven direct use technologies • Pioneer advantage in the development of geothermal resources 	<ul style="list-style-type: none"> • Competition from other industry players • Staff turnover
Market environment	<ul style="list-style-type: none"> • Regional power trade • Demand for specialised services regionally in the geothermal industry • Increased demand for captive power • Direct use/alternative opportunities • Demand for steam 	<ul style="list-style-type: none"> • Regional power trade • Capital flight • Competition from other geothermal developers • Influx from other energy players and sources of power (solar and wind) • Single-buyer Off-taker (Monopoly)

3.1.3 Internal Environment

Internal factors that could impact the Company's success were analysed. These factors focused on examining the governance and administrative structures, internal business processes and resources capabilities.

3.1.3.1 Governance and Administrative Structures

Governance and administrative structures focused on examining governance structures, internal policies, structures, decision making arrangements and reporting relationships.

3.1.3. Internal Business Processes

Internal business processes examined the Company's systems, processes, and standard operating procedures to identify areas of strengths and weaknesses. Table 3.7 provides the factors identified and their implication on strategy.

3.1.3.3 Resources and Capabilities

Resources and capabilities analysed the tangible, intangible and organizational capabilities to identify potential strengths and weaknesses. The factors analysed are enumerated in Table 3.8.

3.1.4 Summary of Strengths and Weaknesses

Based on analysis of the internal environment a summary of strengths and weaknesses is provided in table 3.9.



Table 3.9: Summary of strengths and weaknesses

Factor	Strength	Weaknesses
Governance and Administrative structures	<ul style="list-style-type: none"> • A unique mandate for geothermal development in Kenya • Knowledgeable, committed, and diverse Board of Directors • Strong internal policies and governance instruments • Certification and accreditation from international bodies 	<ul style="list-style-type: none"> • Review and approval of human resource instruments • Organizational synergy • Project Implementation and management
Internal business Processes	<ul style="list-style-type: none"> • ISO certification • Clearly established business processes across all areas of operation 	<ul style="list-style-type: none"> • Utilization of existing business processes • Adoption of technological advancements
Resources and capabilities	<ul style="list-style-type: none"> • Recent exploration success in Paka • Highly skilled and competent workforce • Internally generated revenues • Specialized equipment for geothermal operations (rigs, simulators and lab equipment) • Licensed geothermal fields • Geothermal Centre of Excellence • Productive geothermal wells that are not connected to a power plant 	<ul style="list-style-type: none"> • Financial resources • Optimization of drilling equipment and other assets • Investment in security of assets • Long lead time from geothermal exploration to power production • Stakeholder engagement • Integrated monitoring and evaluation framework • Centralized data and information for planning and decision making

3.1.5 Analysis of 2018 – 2022 Strategic Plan Performance

3.1.5.1 Key Achievements

The overall end-term achievement of the Strategic Plan (2018-2022) is 62.4% based on the planned strategic initiatives as per the thematic areas. The scores for the achievements of the strategic themes are indicated in Table 3.10:

Table 3.10: Achievement per Thematic Areas

No.	THEMATIC AREA	LEVEL OF IMPLEMENTATION
1.	Operational Excellence	
2.	Asset/Resource Commercialization	55.74 %
3.	Financial Sustainability	24.9 %
4.	Human Capital Optimization	83.69 %
Overall end-term achievement		62.4 %

A summary breakdown of the achievements for each of the strategic themes is presented below:

SUMMARY OF KEY ACHIEVEMENTS PER THEMATIC AREA:

No.	Objective	Achievement
Operational Excellence		
	Wells Drilled	23 wells drilled
	Steam Capacity Developed	75.8MW developed
	Drilling Efficiency	Drilling downtime reduced by 6%
	Business Systems & Process Efficiency	GDC is ISO 9001:2015 certified
	Project Management and Menengai projects	5 project charters developed for Baringo-Silali
Asset /Resource Commercialization		
	Capacity Building	Capacity building done for Djibouti, Tanzania, Uganda and Ethiopia totalling to 15 M KES
	Consultancies	14 Consultancies done for 11 companies both locally and globally, totalling to 427,000 USD and 81.6 M KES

Commercialization of Direct Uses

5 direct use projects undertaken

Community Engagement
Stakeholder Engagement

6 CSR projects completed
7.9% improvement in customer satisfaction index

Financial Sustainability

External Resource Mobilization
Exchequer Funding allocation
Revenue from Steam Sales

Total of 46.2 MUS\$ raised
Total of 198.7 MUS\$ raised
Total of 1.7 MUS\$ raised

Human Capital Optimization

Talent Management
Enhance Staff Welfare and Retention

330 staff recruited
Achieved Performance index of 128%

3.1.5.2 Challenges faced during implementation of the 2018-2022 Strategic Plan

Several factors hindered the achievement of planned activities during implementation of the 2018-2022 Strategic Plan.

3.1.5.3 Lessons Learnt

Key lessons learnt during implementation of the 2018-2022 strategic plan are summarized in Table 3.12.

Table 3.12: Lessons learnt

S/ No.	Lessons Learnt	Proposed Action
1.	Adequate stakeholder engagement, collaboration and consultations in development of the strategic plan is key in the successful implementation of the Plan	Involve all relevant stakeholders in key stages of development of the next strategic plan
2.	Alignment of strategic plan with performance management ensures effective implementation of the Plan	Set SMART goals and objectives Set annual targets aligned to the strategic objectives

3.	Inadequate budgetary allocation impedes the implementation of the strategic plan	Enhance resource mobilization Diversification of internal generated revenue Align annual budgets to strategic plan
4.	Cascading, communication and sensitization of the strategic plan to all the staff enhances ownership	Involve staff in the development of the new strategic plan Cascade the final strategy to all staff and undertake sensitization
5.	Monitoring, evaluation and reporting of the strategic plan enables implementation, tracking and feedback for timely corrective action towards attainment of the strategic goals.	Establish an effective monitoring, evaluation and reporting framework Have a dedicated team to monitor strategy implementation Undertake mid-term review of Strategic Plan and communicate to stakeholders
6.	Accountability is key in promoting prudent utilization of available resources	Optimization of GDC resources thus enhancing resource sustainability Establish/enforce systems to ensure accountability
7.	Government strategic priorities change during implementation period	Undertake mid-term reviews of the Strategic Plan to align with new government priorities
8.	Management good will, involvement & support is key to organizational success	Ensure the Board and management team are involved in communication and cascading of the new strategic plan
9.	There is need to continuously review risk management strategy for effective strategy implementation	Periodic review of corporate risk register to incorporate the emerging risks/issues.

3.2 Stakeholder Analysis

GDC recognizes the critical role played by our stakeholders towards the achievement of the Strategic Plan objectives. Table 3.13 below outlines the stakeholder analysis covering the role and expectation of each stakeholder.

Table 3.13: Stakeholder Analysis

No.	Stakeholder	Role	Expectation of Stakeholder	Expectation of GDC
1.	<ul style="list-style-type: none"> Ministry of Energy and Petroleum 	<ul style="list-style-type: none"> Policy setting and provision of strategic direction for the sector. Resource Allocation Governance and oversight of projects and programs Licensing of geothermal resource sites Policy setting and provision of guidelines on public financial management and economic planning. Resource mobilization and allocation (Provision of budgetary support) Governance and oversight on financial management 	<ul style="list-style-type: none"> Delivery of projects within stipulated timelines and budgetary allocation Compliance with governing laws and regulations Regular reporting on Company and project performance progress Prudent operational and resource management Good corporate governance Prudent and timely escalation of concerns that require Ministry attention or intervention. Corporate responsibility for the communities near the GDC projects 	<ul style="list-style-type: none"> Timely disbursement of funds for Company operations and project delivery Clear communication and guidance on policy direction Support on issues escalated, which require their intervention. Timely delivery of approvals and licenses required. Advocacy support in the policy and regulations Support in resource mobilization

2.	<ul style="list-style-type: none"> The National Treasury and Economic Planning 	<ul style="list-style-type: none"> Policy setting and provision of guidelines on public financial management and economic planning. Resource mobilization and allocation (Provision of budgetary support) Governance and oversight on financial management 	<ul style="list-style-type: none"> Prudent financial management Achievement of project objectives Revenue generation Timely budgetary absorption Good corporate governance Open and timely reporting on Company operations and projects Compliance with the governing laws and regulations 	<ul style="list-style-type: none"> Support in resource mobilization. Timely approvals and disbursements of funds Timely approvals and release of government securities e.g., Letter of support (LoS), Partial Risk Guarantee (PRG). Adequate budgetary allocation Advocacy support in financial policies
3.	<ul style="list-style-type: none"> Energy and Petroleum Tribunal 	<ul style="list-style-type: none"> Hear and determine disputes and appeals relating to the energy sector 	<ul style="list-style-type: none"> Compliance with the governing laws and regulations Timely and accurate escalation of legal disputes 	<ul style="list-style-type: none"> Unbiased and objective resolution to disputes Timely response in addressing disputes
4.	<ul style="list-style-type: none"> Development Partners 	<ul style="list-style-type: none"> Provision of funding and budgetary support for project delivery Provision of technical support and capacity building 	<ul style="list-style-type: none"> Prudent utilization and timely absorption of development funds Delivery of projects within stipulated timelines and budgetary allocation Regular reports on project progress and deliverables Accountability and good corporate governance 	<ul style="list-style-type: none"> Prompt approvals and disbursements of funds. Provision of technical support and capacity building Timely, regular and transparent correspondence and engagement in project development and progress

			<ul style="list-style-type: none"> • Compliance with the Environmental, Social and Governance (ESG) laws • Compliance with the governing laws and regulations 	
5.	<ul style="list-style-type: none"> • Kenya Electricity Generating Company (KenGen) 	<ul style="list-style-type: none"> • Generation of power from various sources including geothermal • Purchase of steam from GDC steam sales • Potential partners in geothermal development 	<ul style="list-style-type: none"> • Provision of steam for power generation • Regular and timely submission of invoices • Prompt operation and maintenance of the steam wells and related equipment. • Engagement in areas of partnership in geothermal development 	<ul style="list-style-type: none"> • Prompt payment of invoices on steam charge • Prudent and regular correspondence on operation and maintenance requirements • Prioritized engagement on joint partnership opportunities in geothermal development • Prudent and efficient utilization of supplied steam
6.	<ul style="list-style-type: none"> • Kenya Power and Lighting Company (KPLC) 	<ul style="list-style-type: none"> • Purchase of power from power generators • Retail selling of power to consumers. • Maintenance of distribution network 	<ul style="list-style-type: none"> • Provision of steam for power generation to KenGen and IPP's • Regular and timely submission of invoices to KenGen and IPP's • Timely development of geothermal steam available for power generation 	<ul style="list-style-type: none"> • Prompt payment of power purchased to power generators. • Regular communication on any expected delays in payment or dynamics in power dispatch

7.	<ul style="list-style-type: none"> Kenya Electricity Transmission Company Limited (KETRACO) 	<ul style="list-style-type: none"> Provision of transmission connectivity Evacuation of power from generation sites 	<ul style="list-style-type: none"> Timely construction and completion of geothermal power plants Prompt and clear communication on the transmission connection requirements and regular reporting on the project progress of geothermal power plants 	<ul style="list-style-type: none"> Timely construction and completion of transmission connectivity Prudent operation and maintenance of the transmission connectivity Consistent availability of the transmission system for evacuation of power
8.	<ul style="list-style-type: none"> Rural Electrification and Renewable Energy Corporation (REREC) 	<ul style="list-style-type: none"> Expand rural electrification to drive uptake of geothermal electricity 	<ul style="list-style-type: none"> Timely delivery of projects 	<ul style="list-style-type: none"> Expansion of rural electrification to create demand
10.	<ul style="list-style-type: none"> Energy and Petroleum Regulatory Authority (EPRA) 	<ul style="list-style-type: none"> Energy sector Regulation Approval of PPAs and PISAA agreements Set, review and adjust electric power tariffs and tariff structures. Issue, renew, modify, suspend, or revoke licenses and permits 	<ul style="list-style-type: none"> Compliance with conditions of licenses or permits. Compliance to set tariffs 	<ul style="list-style-type: none"> Timely approvals of licenses, permits, agreements and tariffs. Clear policy approval guidelines
11.	<ul style="list-style-type: none"> National Environment Management Authority (NEMA) 	<ul style="list-style-type: none"> Environmental approvals and Issuance of licenses Compliance to set guidelines 	<ul style="list-style-type: none"> Compliance with Environmental Management requirements and timely reporting. 	<ul style="list-style-type: none"> Timely approval of permits and licenses

12.	<ul style="list-style-type: none"> • County Governments 	<ul style="list-style-type: none"> • Issue business license. • Licensing land use 	<ul style="list-style-type: none"> • Expansion of economic activities & employment 	<ul style="list-style-type: none"> • Timely approval of licensing and permits. • Provision of utility services. such as project area roads and water • Participation in conflict resolution especially on land matters
13.	<ul style="list-style-type: none"> • Parliament 	<ul style="list-style-type: none"> • Discuss, approve and allocate budgets. • Appropriates funds for expenditure by GDC. • Discuss, approve, operationalize energy laws and other legislative instruments. • Drafting of relevant energy bills • Exercises oversight over revenue and expenditure 	<ul style="list-style-type: none"> • Prudent utilization of allocated budget • Timely response to parliamentary questions • Regular progress reporting • Timely and cost-effective delivery of programmes & projects • Accountability and good corporate governance • Mutually beneficial existence with communities in our areas of operation • Minimal and sustainable impact on the environment 	<ul style="list-style-type: none"> • Enactment of laws and regulations for the sector • Effective representation and oversight • Budgetary approval
14.	<ul style="list-style-type: none"> • Financial Institutions 	<ul style="list-style-type: none"> • Provision of funds for programmes & projects 	<ul style="list-style-type: none"> • Timely loan repayment • Prudent financial management • Achievement of project objectives • Management of partnership relationships 	<ul style="list-style-type: none"> • Timely loan approval and disbursements

15.	<ul style="list-style-type: none"> • Civil Society Organizations (CSOs) 	<ul style="list-style-type: none"> • Monitor GDC operations. • Hold GDC accountable. • Advocate for inclusivity of all parties to the development of the programme/ projects 	<ul style="list-style-type: none"> • Compliance to laws and policies. • Accountability • Inclusivity of all stakeholders 	<ul style="list-style-type: none"> • Promote peace and security. • Watchdog of society • Support services to the disadvantaged groups
16.	<ul style="list-style-type: none"> • Kenya Revenue Authority (KRA) 	<ul style="list-style-type: none"> • Tax Collection and administration 	<ul style="list-style-type: none"> • Compliance to statutory requirements relating to taxation 	<ul style="list-style-type: none"> • Timely provision of tax compliance certificate • Provision of tax exemptions where applicable
17.	<ul style="list-style-type: none"> • Direct Use Investors 	<ul style="list-style-type: none"> • Develop Direct use projects. • Mobilization of funds for Direct Use Investments • Ensure consumption of the contracted power/ steam 	<ul style="list-style-type: none"> • Provision of steam of the right quantity and quality • Compliance to contractual provisions 	<ul style="list-style-type: none"> • Prompt payments for steam utilized. • Compliance to contract terms • Professionalism in undertaking their duties
18.	<ul style="list-style-type: none"> • Investors: Independent power Producer (IPPs), Joint Venture (JV) Partners 	<ul style="list-style-type: none"> • IPP-Steam conversion to electricity • JV- provide financing or expert in geothermal drilling and development 	<ul style="list-style-type: none"> • Fairness in award of contracts • Clarity in investment processes • Prompt and transparent communication • Guaranteed supply of steam 	<ul style="list-style-type: none"> • Compliance with contractual obligations • Prompt payment of steam charges
19.	<ul style="list-style-type: none"> • Media 	<ul style="list-style-type: none"> • Communicate to public. • Market the Company to the public • Dissemination of information 	<ul style="list-style-type: none"> • Open and factual dissemination of information 	<ul style="list-style-type: none"> • Fair coverage and representation

20.	<ul style="list-style-type: none"> Landowners 	<ul style="list-style-type: none"> Provide land access rights 	<ul style="list-style-type: none"> Fair and timely land compensation 	<ul style="list-style-type: none"> Uninterrupted access to land upon compensation
21.	<ul style="list-style-type: none"> Local community 	<ul style="list-style-type: none"> Support and safeguard projects. Provide human capacity to the project 	<ul style="list-style-type: none"> Continuous community engagement Involvement in selection of CSR projects Employment opportunities 	<ul style="list-style-type: none"> Project support (Social License) Guard and protect GDC assets and staff.
22.	<ul style="list-style-type: none"> National Land Commission 	<ul style="list-style-type: none"> Manage public land on behalf of national and county governments. Facilitate change of land ownership 	<ul style="list-style-type: none"> Timely submission of land adjudication requirements Compliance with land laws and regulations 	<ul style="list-style-type: none"> Timely facilitation and processing of land adjudication
23.	<ul style="list-style-type: none"> National Government Administration Officers (NGAO) 	<ul style="list-style-type: none"> Provision of security in GDC project areas Participate in conflict resolution. Ensure order and harmony 	<ul style="list-style-type: none"> Compliance with government laws and regulations Timely escalation of security issues 	<ul style="list-style-type: none"> Prompt response to security issues. Facilitation of peaceful co-existence with local communities
24.	<ul style="list-style-type: none"> Contractors and Suppliers 	<ul style="list-style-type: none"> Deliver goods, services and works 	<ul style="list-style-type: none"> Fair and efficient procurement processes and opportunities Prompt payment for goods delivered and services provided. Amicable resolution of contractual disputes 	<ul style="list-style-type: none"> Timely supply of quality goods works and services as per specification. Amicable resolution of contractual disputes Timely submission of invoices and supporting documents for payment Compliance with government laws and regulations

25.	<ul style="list-style-type: none"> • Labour Organizations 	<ul style="list-style-type: none"> • Champion welfare of their members 	<ul style="list-style-type: none"> • Compliance with labour laws, regulations and agreements. • Cordial relationship and continuous engagement with labour organizations. • Amicable labour dispute resolution 	<ul style="list-style-type: none"> • Compliance with labour laws, regulations and agreements. • Cordial relationship and continuous engagement • Amicable labour dispute resolution
26.	<ul style="list-style-type: none"> • Ministry of Industrialization, Trade & Industry 	<ul style="list-style-type: none"> • Issue required license and permits. • Investment promotion 	<ul style="list-style-type: none"> • Compliance with government laws and regulations. • Regular communication on investment opportunities 	<ul style="list-style-type: none"> • Promote GDC investment opportunities. • Approval of licenses and permits. • Favorable policy and regulation
27.	<ul style="list-style-type: none"> • Institutions of Higher Learning 	<ul style="list-style-type: none"> • Research and innovation. • Training • Consultancy work 	<ul style="list-style-type: none"> • Provision of internship to their trainees • Collaboration in research, innovation and curriculum development. 	<ul style="list-style-type: none"> • Collaboration in research and innovation
28.	<ul style="list-style-type: none"> • Regional Geothermal Organizations and Governments 	<ul style="list-style-type: none"> • Collaboration in development of geothermal industry 	<ul style="list-style-type: none"> • Collaboration and support in geothermal resource development activities • Prompt payment of subscriptions 	<ul style="list-style-type: none"> • Collaboration and support in geothermal resource development activities • Prompt payment for services offered

<p>29.</p>	<ul style="list-style-type: none"> • General Public 	<ul style="list-style-type: none"> • Consume power 	<ul style="list-style-type: none"> • Low-cost power • Equal employment opportunities • Information sharing 	<ul style="list-style-type: none"> • Consumption of power • Prompt payment for consumed power
<p>30.</p>	<ul style="list-style-type: none"> • Opinion Leaders 	<ul style="list-style-type: none"> • Influence public opinion 	<ul style="list-style-type: none"> • Regular and effective engagement and information sharing on GDC project and activities 	<ul style="list-style-type: none"> • Support the Company's projects and activities
<p>31.</p>	<ul style="list-style-type: none"> • Private Sector (KAM, KEPSA, Chamber of Commerce) 	<ul style="list-style-type: none"> • Invest, own and operate private businesses. • Consume power 	<ul style="list-style-type: none"> • Supply of reliable steam for investment • Contribute to lowering the cost of power. • Regular engagement and information sharing 	<ul style="list-style-type: none"> • Investment and partnership in GDC project and activities • Support and publicity of GDC project and activities
<p>32.</p>	<ul style="list-style-type: none"> • Board of Directors 	<ul style="list-style-type: none"> • Contribute to achievement of the mission and vision of the Company. • Prudently manage resources. 	<ul style="list-style-type: none"> • Compliance with applicable laws and regulations • Prudent corporate governance and accountability • Compliance with approved company policies • Regular and timely reporting on progress of projects and Company operations 	<ul style="list-style-type: none"> • Strategic direction • Adherence to corporate governance and Mwongozo Code of conduct • Advocacy and support for GDC objectives and activities

33. • Employees

- Contribute to achievement of the mission and vision of the Company.
- Prudently manage resources.

- Competitive remuneration packages
- Fair Career Progression
- Conducive work environment
- Continuous training and development

- Fulfill mandate.
- Demonstrate core values of the Company.
- Accountability and prudent management of Company resources



The background image shows an industrial site with large machinery, pipes, and workers wearing hard hats. The scene is overlaid with a green tint. The workers are positioned around a large piece of equipment, possibly a valve or pump, with large handwheels. The overall atmosphere is one of industrial activity and maintenance.

CHAPTER FOUR

Strategic Issues, Goals and Key Result Areas

4.1 Overview

4.2 Strategic Issues

The strategic issues are problems or opportunities emanating from situational analysis that the Company has to manage in order to be able to fulfil its mandate and mission. The following strategic issues have been identified:

Strategic Issue 1: Underdeveloped geothermal resources

GDC is mandated to develop geothermal resources through surface exploration, infrastructural development, exploration, appraisal, and production drilling. Further, the Company is also responsible for management of proven steam fields, promoting and developing direct uses of geothermal resources as well as developing human capacity for geothermal development. Kenya is endowed with abundant geothermal resources with an estimated potential of 10,000MWe out of which 940 MW is currently installed capacity in the national grid. In addition, there exists opportunity for alternative uses of geothermal resources to spur economic transformation. GDC will thus focus on harnessing the knowledge and expertise in geothermal exploration and drilling, minimize upfront risks and enhance the capacity of its human resources to fast-track development of geothermal resources and provide solutions to the high cost of energy.

Climate change is a cross-cutting sustainable development issue with economic, social and environmental impacts that have been experienced globally. Energy plays a key role in enhancing adaptive capacity, resilience to climate change and resource use efficiency across the different sectors. One of the Country's priorities in mitigation activities include increasing renewables in the electricity generation mix with an emphasis on renewable sources such as geothermal. This creates a critical role in transitioning Kenya towards a green economy trajectory. National Climate Change Action Plan (NCCAP) 2027 – 2023 anticipates the development of Geothermal (208 MW) prioritized as baseload generation that is climate resilient. Environmental management in the energy sector where GDC is domiciled will thus be critical in ensuring sustainability in the energy value chain. In addition, by developing carbon-free and reliable geothermal energy, GDC contributes to climate change mitigation.

Strategic Issue 2: Sustainable financing

Geothermal projects are capital intensive and funding remains the biggest hurdle to developing geothermal resources. Insufficient financial resources hamper the ability of the Company to deliver

on its mandate. To accelerate development of geothermal resources and achieve the desired outcomes in the next five years, resource mobilization is critical in catalyzing additional financial resources. GDC shall explore diverse and innovative avenues for resource mobilization while complying with relevant financial and procurement laws and guidelines to facilitate financial sustainability.

Strategic Issue 3: Stakeholder Support

Brand reputation and visibility dictates the kind of support that a company receives from its stakeholders and strategic partners, which include human resource development, resource mobilization and technology transfer. Continual engagement and involvement with all stakeholders throughout the project life is critical for the success of the project. The Company therefore commits to build and sustain these partnerships and collaborations with its stakeholders.

Strategic Issue 4: Performance and Productivity

The capability of an organization to adapt, develop, and consistently improve over time affects its performance and productivity. Organizational capacity involves improving an organization's systems, structures, processes and people in order to improve its operations and services for increased success. This includes optimization of resources that include finances, physical infrastructure, technology and human resource development. GDC will focus on developing human resources within the Company, improving formal management systems and business processes, and fostering positive relationships with employees and other stakeholders.

Succession planning and staff retention challenges impact negatively on knowledge management and skills development which affects geothermal resource development and organizational stability. The Company will seek to build organizational leadership, develop and nurture human capital and ensure a continuous flow of human resource with the right skills, knowledge and attributes to perform various roles efficiently and effectively. This provides stability to sustain organizational performance and ensure uninterrupted delivery of services and programmes and business continuity. During the plan period, the Company will seek to enhance its human resource technical skills and investments in development and retention of its workforce.

GDC recognizes the power of organizational culture in creating a strong foundation for improving performance and productivity and will thus seek to align the culture with the Company's vision and

goals. All change involves adopting new mindsets, processes, policies, practices and behavior. GDC will work with management and staff to help them understand what the change means for them, helping them make and sustain the transition and working to overcome any challenges involved.

4.3 Strategic Goals

The Company has identified Strategic goals that it seeks to realise arising from addressing the strategic issues identified in 4.2 above. The following strategic goals have been identified:



4.4 Key Result Areas (KRAs)

The strategic framework for Geothermal Development Company Strategic Plan 2027-2023 is aligned to its mandate. The framework outlines interrelated KRAs which the Company will pursue in the next five years. It is expected that, institutionalization of the framework will revitalize the Company's performance in realization of its mandate.

A red arrow pointing to the right, containing the text 'KRA 1:' in white.

KRA 1:

KRA 1: Geothermal Resource Development and Management

Geothermal power plays an essential role in the Kenyan power system in providing solutions to high cost of energy. The Company seeks to accelerate geothermal resource development by fast-tracking development of geothermal resources and exploring green fields. GDC will procure IPPs to convert steam to power. In addition to power generation, the Company will promote the development of alternative uses of geothermal resources by engaging investors in a bid to commercialize direct uses. Further, GDC will harness the knowledge and expertise in geothermal exploration and drilling but also enhance the capacity of its human resources to fast-track development of geothermal resources.

A green arrow pointing to the right, containing the text 'KRA 2:' in white.

KRA 2:

KRA 2: Financial Sustainability

To realize its objectives under the strategic plan, GDC will enhance its current sources of funding and diversify funding sources to address the resource gaps geared towards achieving financial sustainability and self-sufficiency. GDC will embark on various measures to raise the requisite resources for implementation of programmes and projects. These include: continuous participation in the national budgeting process and lobbying for additional resources from the National Treasury, strengthening development partner's linkages, leveraging alternative uses of geothermal resources and consultancies to generate revenue, attracting investment in geothermal development, pursuing strategic partners through public private partnerships for enhanced projects implementation; and exploring carbon trading for geothermal energy.

Prudent utilization and management of financial resources is also critical in ensuring financial sustainability. GDC will therefore endeavor to utilize available resources efficiently and effectively as stipulated in the financial and procurement laws and guidelines to facilitate the achievement of the set goals and objectives.

A grey arrow pointing to the right, containing the text 'KRA 3:' in white.

KRA 3:

KRA 3: Stakeholder Management

The Company recognizes the importance of stakeholder management and effective stakeholder engagement in the achievement of its goals and objectives. Effective stakeholder engagement helps to build trust, enhance transparency, and foster collaboration, ultimately leading to better outcomes for all involved. In this regard, the Company will seek to build and maintain strong relationships with their stakeholders, resolve conflicts and issues that may arise between them and their stakeholders. To achieve this, the Company has identified and prioritized its stakeholders to better understand their needs and expectations. This will improve engagement with them in a way that aligns with the Company's goals and values.



**KRA
4:**

KRA 4: Organizational Capacity

During the strategic planning period, the Company will continue to attract and retain competent staff through review and implementation of responsive human resource instruments. The Company will further commit to continuously undertake capacity building for its Board and employees, especially on emergent issues and developments within the energy sector and operating environment. The Company shall ensure all statutory reports are submitted to relevant oversight agencies and appropriate internal control systems are established. GDC will strengthen corporate planning, monitoring and evaluation to ensure successful implementation of the strategic plan.

To improve efficiency in delivery of its services, this plan envisages: improved automation of the Company's functional activities, ICT connectivity coverage in all operational areas and implementation of cloud computing services. In addition, the Company will enhance project management excellence and roll out a dynamic information security system by developing Cyber Security & Disaster Preparedness Policy and Cyber Security Risk Management.

Table 4.1: Strategic Issues, Goals and KRAs

No.	Strategic Issues	Goals	KRAs
1.	Underdeveloped geothermal resources	Develop geothermal resources	Geothermal resource development and management
2.	Sustainable financing	Achieve financial sustainability	Financial sustainability
3.	Stakeholder support	Build and sustain stakeholder partnerships and collaborations	Stakeholder management
4.	Performance and productivity	Improve performance and productivity	Organizational capacity



CHAPTER FIVE

Strategic objectives and strategies

5.0 Overview

5.1 Strategic Objectives

Table 5.1 provides strategic objectives that have been formulated to address each of the Key Result Areas. The table also provides the desired outcomes derived from the strategic objectives and the -5-year outcome annual projections for the formulated strategic objectives. Strategies formulated for each of the strategic objectives are provided in Table 5.2.

Table 5.1: Outcomes Annual Projections

No	Strategic Objective	Outcome	Outcome Indicator	Baseline		Projections				
				Value	Year	24/2023	25/2024	26/2025	27/2026	28/2027
KRA 1: Geothermal Resource Development and Management										
1.	To accelerate geothermal resource development	Accelerated geothermal resource development	Additional megawatts availed	565	2023	28	34	53	68	35
			Number of wells drilled	132	2023	7	9	14	16	11
			Number of fields explored	6	2023	6	6	6	6	6
			No. of power plant generators procured	3	2023	-	2	-	-	-
		Improved drilling efficiency	% reduction of downtime	%37	2023	26	18	13	9	6
		Established commercial Direct Use projects (Captive power and heat)	No. of established commercial direct use projects	-	2023	-	2	1	2	-
		Enhanced research and innovation	No. of innovative ideas incubated	-	2023	3	3	3	3	3
	No. of ideas patented		-		1	-	1	-	1	
	To exploit other geothermal resource potentials	Geothermal resource potentials exploited	No. of agreements signed with EGS partners	-	-	-	1	-	-	1
			No. of investor contracts on green hydrogen	-	-	-	-	-	1	-
To contribute to climate change mitigation and adaptation efforts	Enhanced environmental conservation	No. of trees planted	-	-	500,000	500,000	500,000	500,000	500,000	

No	Strategic Objective	Outcome	Outcome Indicator	Baseline		Projections				
				Value	Year	24/2023	25/2024	26/2025	27/2026	28/2027
KRA 2: Financial Sustainability										
2.	To mobilize financial resources climate change mitigation and adaptation efforts	Increased financial resources Enhanced environmental conservation	Revenue generated from steam sales							
			Olkaria (KES million)	17,400	2023	4,061	4,583	5,135	5,703	5,703
			Sosian Menengai Geothermal Power Limited (SMGPL) (KES million)	-	2023	554	1054	1054	1054	1054
			Orpower (KES million)	-	-	-	-	-	-	683
			Globeleq (KES million)	-	2023	-	-	-	439	913
			Paka (KES million)	-	2023	-	-	-	-	647
			Data Centre 5MW - Project III (KES million)	-	-	-	-	-	15	15
			Captive Power Project IV (5MW)	-	-	-	-	-	15	-
			Revenue generated from Consultancies and Technical Advisory Services							
			No. of Consultancies services	18	2023	4	4	4	4	4
			Revenue generated from Consultancy and technical advisory services KES M	130	2023	24	25	1830	28	1830
			Funds mobilized from external sources							
			GoK exchequer funds (KES million)	23876	2023	705	970	900	900	900
			Development Partner Funds projected (KES million)	5,548	2023	3,503	2,238	2,000	2,000	2,000
			Investments mobilized from strategic partners (KES million)	-	2023	-	3,100	4,000	3,000	1,500
Investment from IPPs	-	-	-	11,250	17,835	12,465	-			

	Improved utilization and management of resources	% CoK exchequer absorption	%98.5	2023	100	100	100	100	100
		% of development partner funds absorption	%98.1	2023	100	100	100	100	100
		% absorption of Procurement and disposal plans	%90.6	2023	100	100	100	100	100
		Pending Bills as a % of the budget	%2.35	2023	<1	<1	<1	<1	<1
		% compliance with financial and procurement laws, regulations, policies, circulars, and government guidelines	-	2023	100	100	100	100	100
		% of Assets tagged and valued	-	2023	100	100	100	100	100

KRA 3: Stakeholder Management

3.	To strengthen corporate brand reputation	Strong corporate brand	Brand reputation index (%)	-	-	X	-	X6+	-	X10+
----	------------------------------------------	------------------------	----------------------------	---	---	---	---	-----	---	------

KRA 4: Organizational Capacity

4:	To strengthen the Company's institutional framework	Improved Performance	Performance contract composite score	2.9976	2023	2.70	2.60	2.50	2.40	2.30
		Improved Employee Satisfaction	Employee satisfaction index (%)	49%	2022/23	-	-	62.5	-	85
		Improved Corporate Governance	Board performance score	-	-	100	100	100	100	100
			Level of compliance with legal and governance structures (%)	100%	2023	100	100	100	100	100
			Level of compliance with national values and principles of governance	100%	-	100	100	100	100	100
		Improved Operational Efficiency	Level of Automation	40%	2023	-	-	55	-	70

5.2 Strategic Choices

The following strategies as identified in table 5.2 have been formulated in order to achieve the strategic objectives. Key activities to action the various strategies are provided in Appendix I.

Table 5.2: Strategic Objectives and Strategies

No.	Key Result Area	Strategic objective	Strategies
1.	Geothermal Resource Development and Management	1.1 To accelerate geothermal resource development	Explore green fields
			Fast track development of geothermal fields
			Improve well siting
			Improve drilling efficiency
		1.2 To exploit other geothermal resource potentials	Sustainable management of geothermal resources
			Exploit direct use potentials
			Enhance research & innovation
			Explore emerging markets opportunities
		1.3 To contribute to climate change mitigation and adaptation efforts	Align to the national green hydrogen strategy (HS) and Road Map
			Pursue carbon markets
			Enhance environmental conservation, health and safety practices
2.	Financial Sustainability	2.1 To mobilize financial resources	Enhance revenue from steam sales
			Commercialize direct use application
			Enhance revenue from consultancy and technical advisory services
			Seek funding from external sources
			Prudent utilization and management of financial resources
			Asset management and utilization

3.	Stakeholder Management	3.1 To strengthen corporate brand reputation	Enhance corporate communication Enhance social license Enhance engagement with all stakeholders Market direct use of geothermal resources
4.	Organizational Capacity	4.1 To strengthen the Company's institutional framework	Enhance good corporate governance practices Strengthen human resource Strengthen corporate planning, monitoring and evaluation Enhance project management excellence Digitization & digitalization Enhance physical infrastructure

5.3 Strategic Assumptions

Execution of the Company's strategic plan 2027-2023 depends upon the ability to identify specific actions, resource them, and tie action and results to milestones. This strategic plan assumes that:

- a) There will be no major disruptions in the operating environment;
- b) The legal and regulatory frameworks will remain stable;
- a) The governance instruments will be approved on time by the relevant actors;
- c) The requisite human and financial resources will be available to drive implementation of the Strategic Plan;
- d) There will be goodwill from stakeholders and partners in implementation of the Plan; and
- b) Appropriate business continuity management will be put in place to respond to potential threats that may derail plan implementation.



OUR FIVE YEAR PROJECTION



**TARGET
OUTPUT
218MW**

6

**FIELDS
TO BE
DEVELOPED**

57

**NO. OF WELLS
TO BE DRILLED**

**BUDGET
KES.
102.2B**

An aerial photograph of an oil drilling rig in a green field, overlaid with a semi-transparent green filter. The rig is the central focus, with its derrick and various components visible. The surrounding landscape is a mix of green fields and some industrial structures.

CHAPTER SIX

Implementation and coordination framework

6.0 Overview

6.1 Implementation Plan

An implementation plan that describes how the strategic plan will be operationalized has been developed and consists of the action plan, budgeting and performance contracting.

6.1.1 Action Plan

The action plan is the operational framework that creates a shared understanding among the implementers to allow for effective implementation of the Strategic Plan. The action plan implementation matrix consists of:

- a) Strategic Issues
- b) Strategic Goals
- c) Key Result Areas
- d) Strategic Objectives
- e) Strategies
- f) Key Activities
- g) Expected Outputs
- h) Output Indicators
- i) Targets
- j) Budget
- k) Responsibility

6.1.2 Annual Work plan and Budget

An Annual work plan has been developed from the action plan implementation matrix for the financial year 2024/2023. This annual work plan shall constitute the Company's annual performance contracts.

6.2 Coordination Framework

Appropriate coordination mechanisms will be developed to ensure effective collaboration with all relevant stakeholders towards achieving its mandate. The Company has aligned the human resource instruments to the strategic plan to ensure that all set goals and strategic objectives are implemented by staff with required skills and competencies. This will enable the Company to identify skills and competencies gaps and put in place strategies to fill the gaps to enhance efficiency and effectiveness in achieving the implementation of the Plan.

6.2.1 Institutional Framework

The Company has developed an organization structure that seeks to maximize efficiency and effectiveness in meeting the strategic objectives, facilitate enhanced working relationships within various Departments and retain functional and administrative order whilst promoting flexibility and innovation. The Company will develop, review and implement policies, instruments and strategies to support implementation of the strategic initiatives. These include: Review of Human Resource instruments, Research and Innovation policy, Cyber Security & Disaster Preparedness Policy, Monitoring and Evaluation policy, drilling policy, well siting and sequencing policy and marketing and investment strategy. The Company's organizational structure that is aligned to the strategic plan is as follows:

a) **The Board of Directors**

The Management of Geothermal Development Company (GDC) is vested in the Board of Directors who provide policy and oversight.

b) **The Office of the Managing Director**

The office of the Managing Director/CEO is responsible for providing strategic direction in the exploration, development, management and utilization of geothermal resources, to achieve corporate goals and objectives. The Office of the Managing Director will be supported by seven (7) Directorates and two (2) standalone departments. Functions of the various directorates and departments that support realization of GDC's mandate are as outlined below:

i. **Geothermal Resource Development Directorate**

The Directorate is responsible for assessment, development and Management of the company's Geothermal Resource. The Directorate is organized into the following four (4) Departments: Geothermal Resource Assessment; Geothermal Resource Management; Direct Use; and Safety Health and Environment

ii. **Drilling and Infrastructure Development Directorate**

The Drilling and Infrastructure Development Directorate is responsible for infrastructural development, drilling of geothermal wells, provision of drilling logistical support

services, maintenance of drilling and plant equipment and overall project management. The Directorate is organized into the following four (4) Departments: Drilling Operations; Drilling Equipment Maintenance; Drilling Logistics; and Infrastructure Development.

iii. Strategy, Research and Innovation Directorate

The Strategy, Research and Innovation Directorate is responsible for the development of the company's business and strategic plans, funds mobilization, business appraisal, research and innovation. The Directorate will be organized into the following four (4) Departments: Corporate Planning & Strategy; Geothermal Centre of Excellence; Risk and Quality Assurance; and Projects Management.

iv. Finance Directorate

The Finance Directorate is responsible for managing the budgeting, treasury accounting, reporting and investment processes; and management of revenue collection. The Directorate is organized into the following three (3) Departments: - Financial Accounting; Management Accounting; and Treasury Management.

v. Company Secretary and Legal Services Directorate

The Legal Affairs and Company Secretary Directorate is responsible for provision of Board secretarial services, legal litigation and advisory services and company insurances. The Directorate will be organized into the following three (3) departments: Board Secretarial Services and Insurance; Legal Services; and Corporate Communication & Marketing.



vi. Human Resource and Administration Directorate

The Human Resource and Administration Directorate is responsible for formulating and articulating Human Resource Management policies, procedures, standards, rules and regulations; that are integrated with the Company's strategic plan; and implement Human Capital Management reforms that are in tandem with best global market practice. The Directorate will be organized into the following four (4) Departments: Human Resource Planning; Human Resource Services; Human Resource Development; and Administration Services.

vii. Corporate Services Directorate

The Corporate Services Directorate is responsible for delivery of quality corporate services including workplace facilities, assets, transport and security services and automation in order to support achievement of company performance targets. The directorate will be organized into the following four (4) departments: Regional Coordination; Property Management; Information Communication Technology; and Community Relations.

viii. Supply Chain Management Department

The Supply Chain Management Department is responsible for effective and timely supply of goods works and services and general management of the Supply Chain function in the Company in compliance with the relevant Procurement Acts and Regulations.

ix. Internal Audit Department

The Department is responsible for independent and objective review, examination and evaluation of the company's internal control systems and operations and report on the same to ensure the economic and effective use of resources and compliance to laid down laws, rules, regulations and policies. The Company's organogram is provided in Appendix IV.

The Company has diverse skills across all functional areas and will continually identify the skills gaps and undertake competency development required for implementation of the strategic plan.

6.2.2 Leadership

Effective leadership is essential for execution of the strategic plan. The Board of Directors will spearhead implementation of this Strategic Plan and will provide strategic leadership, be responsible for policy formulation and play an oversight role in the implementation, monitoring and evaluation. The Managing Director will ensure the overall coordination, implementation, monitoring, and evaluation of the Strategic Plan. The Heads of Departments will be responsible for the day-to-day operationalization of the Plan so as to ensure that the planned activities are implemented. GDC will mobilize and enhance linkages, partnerships and collaborations with stakeholders and other players in implementation of the Strategic Plan.

To enhance responsibility and accountability in implementation of the strategic plan, strategic theme teams aligned with the respective KRAs have been identified. The teams will be responsible for providing leadership and coordinating implementation of planned activities in the respective KRAs. Specifically, the team leaders will be expected to:



- a) Communicate the activities, expected outputs and outcomes in their respective KRAs to ensure clarity of vision and purpose;
- b) Assign roles and responsibilities to different players;
- c) Utilize resources as identified in the plan;
- d) Ensure annual departmental and individual work plans are aligned to the corporate plan and budget;
- e) Put in place an appropriate monitoring, evaluation and reporting framework;
- f) Coordinate meetings to evaluate progress; and
- g) Provide relevant reports to management on the Plan implementation status.

6.2.3 Systems and Procedures

During the strategic plan period, the ultimate objective is to adopt technologies and systems that support geothermal resource development. The Company will focus on acquisition, utilisation and maintenance of the technologies and enhance the existing systems and procedures.

6.3 Risk Management Framework

Possible risks, to which the Company may be exposed to during the Strategic Plan implementation have been identified, ranked and suggested mitigation strategies provided.

Impact:

1. **Low:** The hazard may either be controlled or would commonly result in less than minor, illness, injury, or system damage.
2. **Medium:** The hazard may commonly cause severe injury or illness or major system damage, requiring immediate corrective action.
3. **High:** The hazard may commonly cause death or major system loss, requiring immediate cessation of the unsafe activity or operation.

Likelihood:

1. **Unlikely:** Unlikely but possible to occur during standard operations,
2. **Possible:** Likely to occur sometime during standard operations, and
3. **Probable:** Likely to occur often during standard operations.

GDC Organizational Structure

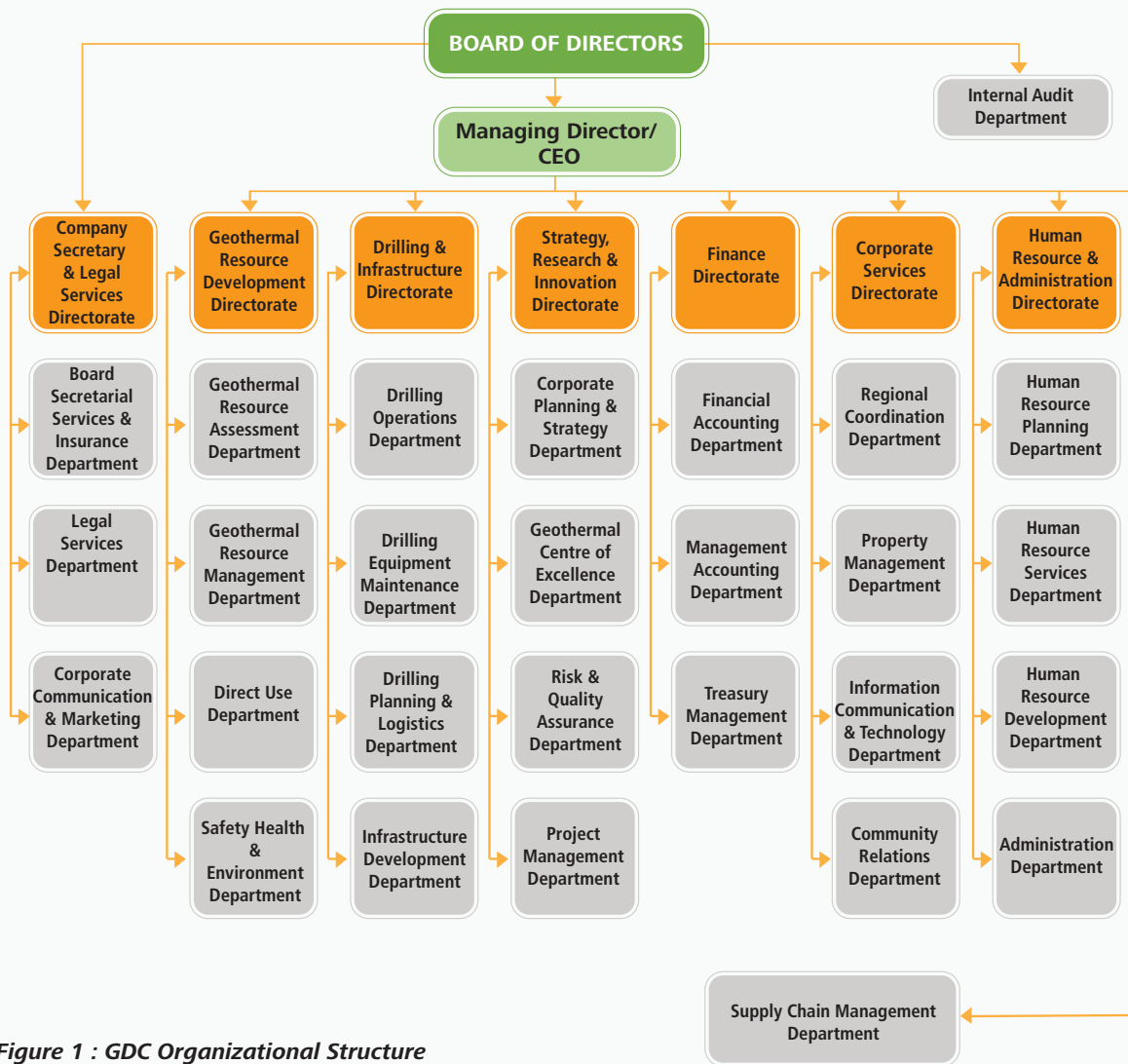


Figure 1 : GDC Organizational Structure



CHAPTER SEVEN

Resource Requirements and Mobilization Strategies

7.0 Overview

7.1 Financial Requirements

The Company requires adequate financial resources for implementation of this Plan. The Key result areas identified will be accomplished through activities which shall be allocated resources as required by the Public Finance Management Act (PFMA) 2012. To implement this Strategic Plan through the planned period, the Company will require a total of Kshs. 101,750M. The financial resource requirements for each KRA are summarized in table 7.1 below:



Table 7.1: Financial Requirements for Implementing the Strategic Plan

Key Result Area	Strategic Objective	2023/24	2024/25	2025/26	2026/27	2027/28	Total
Geothermal Resource development and Management	To accelerate geothermal resource development	3,861.5	17,414.3	25,298.9	20,307.5	5,538.0	72,420.2
	To exploit other geothermal resource potentials	3.0	38.0	0.5	4.3	0.5	46.3
	To contribute to climate change mitigation and adaptation efforts	1.0	1.5	1.0	1.0	1.0	5.5
Financial Sustainability	To mobilize financial resources	159.2	151.5	151.5	151.5	151.5	765.3
Stakeholder Management	To strengthen corporate brand reputation	4424.6	1,144.0	1,214.5	1,330.6	1,208.1	5,321.8
Organizational Capacity	To strengthen the company's institutional framework	48.0	51.7	53.3	53.8	55.8	262.5
Sub-Total		4,497	18,801	26,720	21,849	6,955	78,822
Recurrent Expenditure Projections (Kshs. In millions)							
		2023/24	2024/25	2025/26	2026/27	2027/28	Total
Personnel Emoluments		2,730.0	2,936.0	3,148.3	3,259.3	3,375.9	15,449.6
Board Expenses		30.0	30.0	30.0	30.0	30.0	150.0
Operational/ Administrative Expenses		1,560.0	1,356.0	1,515.2	1,919.4	1,442.6	7,793.2
Sub-Total		4,320.0	4,322.1	4,693.5	5,208.7	4,848.5	23,392.8
Total Expenditure Projections (Kshs. In millions)							
Strategy Implementation		4,497	18,801	26,720	21,849	6,955	78,822
Recurrent Expenditure Projections		4,320.0	4,322.1	4,693.5	5,208.7	4,848.5	23,392.8
Grand Total		8,817	23,123	31,413	27,057	11,803	102,214
Sources of Funds							
Steam sales revenue		4,615	5,637	6,189	7,196	9,000	32,637
Energy supplied to captive power investors		-	-	5	40	55	100
Consultancy and Technical Services assignments		24	25	1,229	1,229	1,229	3,737
GoK Funds		705	970	900	900	900	4,375
Development Partner Funds		3,503	2,238	2,000	2,000	2,000	11,741
Strategic Partner Funds -			33,100	4,000	3,000	1,500	11,600
Investment from IPPs			11,250	17,835	12,465	-	41,550
Total Funding		8,847	23,220	32,159	26,831	14,684	105,740
Net Cumulative cash flow		29	126	872	645	3,526	7,051
Resource Gap (Funding- Costs)		29	97	745	(227)	2,881	3,526

7.1.1 Resource Gaps

The Company has identified financial resource gaps based on estimated financial requirements and funding as indicated in Table 7.2:

Table 7.2: Resource Gaps

Financial Year	Estimated Financial Requirements (KSh. Mn)	Estimated Funding (KSh. Mn)	Net Cumulative cash flow	Variance (KSh. Mn)
Year 1	8,817	8,847	29	29
Year 2	23,123	23,220	126	97
Year 3	31,413	32,159	872	745
Year 4	27,057	26,831	645	(227)
Year 5	11,803	14,684	3,526	2,881
Total	102,214	105,740	7,051	3,526

7.2 Resource Mobilization Strategies

Resource mobilization seeks to strengthen the Company's funding through diversification of funding streams. In this regard, GDC will mobilize resources to enhance its revenue base to be able to finance the implementation of this Strategic Plan. The Company shall institute a robust framework and engage stakeholders to mobilize the requisite resources. GDC will pursue the following strategies:

- a) Enhance current revenue base from steam sales, commercialize direct use application, and enhance consultancies and technical advisory services;
- b) Widen fundraising initiatives which include climate financing from development partners among others;

- c) Pursue joint development model with identified strategic partners for unfunded project components such as steam gathering system for Paka, water supply system for Suswa and production drilling for Paka;
- d) Seek funding from the Government by engaging the National Treasury and relevant parliamentary committee for exchequer allocations; and
- e) Ploughing back revenue from investment during the plan period.

7.3 Resource Management

To optimize use of available resources and promote prudent management for financial sustainability, the Company will put in place the following measures:

- a) Institutionalize effective internal controls and risk management;
- b) Eliminate leakages or wastes in the application and utilization of the Company's resources;
- c) Improve efficiency in the procurement process with compliance to financial laws, regulations, policies, circulars, and government guidelines;
- d) Leverage on technology;
- e) Adopt a Quality Management Systems (QMS) ;
- f) Sustain an effective asset management policy; and
- g) Strengthen assurance and oversight and implement audit recommendations and advisory.



CHAPTER EIGHT

Monitoring, Evaluation and Reporting Framework



8.1 Overview

8.2 Monitoring Framework

The purpose of a ME&R framework is to provide a consistent approach to the monitoring and evaluation of GDC Programmes and Projects, so that sufficient data and information is captured to review implementation progress of initiatives. Monitoring and evaluation will be an integral part of the Company's Performance management system and will be a continuous process. The Strategic Plan shall be cascaded to all staff to enable them understand and plan for their respective roles and ensure that ME&R is integrated into the performance management system. Functional and individual work plans shall be developed in line with activities in the Plan.

The ME&R framework for this Plan will be based on the various Key Result Areas, strategic objectives, outputs and outcomes that the Company envisages to achieve during the 2027-2023 plan period. Progress for each activity shall be measured against specific targets in the Plan and reporting done on quarterly, biannually and annual basis. Results from the analysis shall then be used to inform decision-making, identify challenges and take immediate corrective action.

8.2.1 Coordination of Monitoring, Evaluation and Reporting

For the Strategic Plan to be effectively implemented, ME&R shall be coordinated by strategy, research and innovation directorate. The directorate shall ensure that strategies are being implemented, performance is being measured, progress reports are made and discussed, and corrective action is taken where necessary. Heads of Departments will be responsible for the day-to-day implementation, reporting, monitoring, and evaluation of the plan. They shall be accountable for the completion of tasks indicated in their respective work-plans. Responsibility for data collection, aggregation, analysis and reporting on the Plan will rest with the Heads of departments.

The Board shall be responsible for overseeing the monitoring and evaluation of the Plan's Implementation. The Managing Director (MD) shall ensure that a performance management system is implemented, actual performance is measured against negotiated targets at all levels and feedback provided to key actors in the implementation.

8.3 Performance Standards

The Company has defined the key performance indicators at the output and outcome levels to facilitate tracking performance for the strategic plan.

8.4 Evaluation Framework

Evaluation helps improve performance and achieve results through the measurement and assessment of performance in order to more effectively manage the outputs and outcomes. The Company will undertake periodic review of the results of the Plan to establish the extent to which the outputs and expected outcomes have been achieved with a view to advising management and the Board on any performance gaps as well as offer feasible strategy alternatives. Performance evaluation and review of the strategic plan shall be undertaken as follows:

8.4.1 Mid-Term Evaluation

A Mid-Term evaluation and review will be undertaken as at December 2025 to take stock of the strategy implementation status. The review will inform the necessary changes in the objectives, strategies, and activities to be incorporated for the remainder of the Plan period. Any emerging issues from the operating environment affecting the Company will be addressed at this point

8.4.2 End-Term Evaluation

A final evaluation for this Strategic Plan shall be carried out at the end of the planning period to:

- a) Measure actual performance against set targets and establish gaps or variance, if any;
- b) Enumerate achievements realized, challenges faced and mitigation measures;
- c) Document lessons learnt; and
- d) Inform the way forward on the next cycle Strategic Plan.

8.5 Reporting Framework and Feedback Mechanism

The performance management system will ensure actual performance is measured against agreed targets at all levels to obtain regular feedback on progress towards achieving the set milestones and results. The Heads of Departments shall ensure progress reports are made, discussed and corrective action taken where necessary. To facilitate reporting on performance, data and information collection templates and procedures shall be developed for use by the various departments. The reports shall describe actions taken towards achieving the specific strategies of the Plan and shall include achievements, challenges, lessons learnt and recommendations.

Progress reporting on implementation of the Strategic Plan is important in adjusting strategic directions and measuring performance. The strategy, research and innovation directorate shall submit the following reports to the Management and the Board on the progress made in implementation of the Plan:

- a) **Quarterly reports** – Management and the Board; and
- b) **Annual reports** – Management, the Board and relevant stakeholders.



Appendix I: Strategic Planning Committee

S/No.	Name	Designation
1.	Eng. Joseph Kitilit	Ag. Manager, Corporate Planning & Strategy-Team leader
2.	Godfrey Shitsama	Manager, Internal Audit
3.	Eric Wamanji	Deputy Manager, Corporate Communications & Marketing
4.	Daudi Korinko	Legal officer
5.	Shammah Kiptanui	Senior Project officer
6.	Dr. Antony Wamalwa	Ag. Manager, Geothermal Resource Assessment
7.	Dr. Robert Ogutu	Ag. Manager, Geothermal Centre of Excellence
8.	Eng. Stephen Kangogo	Ag. Manager, Drilling operations
9.	Janet Suwai	Ag. Manager, Geothermal Resource Management
10.	Patrick Kapto	Deputy Manager, Procurement
11.	Mariam Yunus	Manager, Human Resource Planning
12.	Joseph Mberia	Ag. Manager, Infrastructure Development
13.	Adrian Oyugi	Ag. Manager, Property Management
14.	Bernard Rotich	Direct Use officer
15.	Caroline Tele	Chief Officer, Corporate Planning & Strategy
16.	Jacqueline Rono	Senior Officer, Corporate Planning & Strategy
17.	Tunai Kinyanguk	Ag. Manager, Management Accounting
18.	Erick Kizambo	Senior officer, Performance Management

Geothermal Well
Logging Services

Geothermal Development Company Ltd
P.O. Box 107164, 10710 Napier, New Zealand
www.gdc.co.nz

GDC

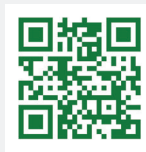


An aerial photograph of a large dam under construction. The dam's concrete structure is visible on the left, with a large earthen embankment on the right. The embankment shows signs of recent earthmoving, with tire tracks and a small pile of debris. The background features a dense forest of green trees under a sky with scattered white clouds. A green rectangular box is overlaid on the top left, containing white text.

Driving
KENYA'S
green growth



Discharge testing of Paka Well 8A at the Paka field, Baringo-Silali Geothermal Project



HEAD OFFICE

Kawi House, South C Bellevue, Popo Lane I Off Red Cross Road

Pilot line: +254 (0) 719 037 000

P.O. Box 100746-00101, Nairobi, Kenya

Email: info@gdc.co.ke

www.gdc.co.ke

NAKURU OFFICE

Tom Mboya St, Nakuru

Polo Centre: +254 (0) 719 036 500

Social Media Pages



@GDCKenya