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Support to the Energy Sector Reform in Lesotho:

Skills Audit and Developing Capacity Building Plan for DoE

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List of acronyms and abbreviations

DoE	Department of Energy
EC	Energy Commission
EDF	European Development Fund
EECPS	Energy Efficiency and Conservation Policy and Strategy
EU	European Union
GoL	Government of Lesotho
LEC	Lesotho Electricity Company
LEP	Lesotho Energy Policy
LEWA	Lesotho Electricity and Water Authority
MoNR	Ministry of Natural Resources
NIP	National Indicative Programme
NKE	Non-Key Expert
NSDP	National Strategic Development Plan
PPA	Power Purchase Agreement
REA	Rural Energy Agency
REPS	Lesotho Renewable Energy Policy and Strategy
REU	Rural Electrification Unit
SAPP	Southern African Power Pool
UAF	Universal Access Fund

1. BACKGROUND AND CONTEXT

Energy is one of the critical enablers of socio-economic development and transformation. Energy is the lifeblood of the modern economy (Oxford Policy Management, 2018). It is therefore important that there is sustainable supply of affordable and quality energy for Lesotho to sustain its growth towards the achievement of its short-, medium- and long-term development plans.

Energy efficiency has also been recognized as a priority issue which can help reduce energy expenditure and increase the affordability of energy in poorer households by bringing down the per-unit cost of electricity, hence also, reducing pollution by lowering the need for generation and associated emissions.

Developing human skills is therefore a critical strategic imperative. The main skills development change drivers that have an impact on DoE include technology advancement; labour market demands; emergence of the green economy approach; global and national climate change protocols as well as reforms in the energy sector.

1.1 Overview of the Energy Sector in Lesotho

Lesotho is characterized by its mountainous terrain and a relatively small population. The energy sector in Lesotho is a crucial component of the country's development, providing the necessary power for economic activities and improving the quality of life for its citizens. This overview presents various aspects of the energy sector in the country, including its current status, challenges, and future prospects.

a) Energy Landscape and Sources

Lesotho has significant hydropower potential, with several rivers and waterfalls throughout the country. The country has three hydropower plants, with a combined installed capacity of 72 MW. However, due to the small size of the plants and the variability of the country's rainfall patterns, hydropower generation is limited.

Lesotho has also started to explore the potential of solar and wind power, with a few small-scale projects being implemented. The government of Lesotho is actively promoting the development of renewable energy, with a target of increasing the share of renewable energy in the country's energy mix to 40% by 2025.

Overall, the energy sector in Lesotho faces several challenges, including limited access to modern energy services, a heavy reliance on biomass and imported energy, and the need to develop and diversify the energy mix. However, the country also has significant untapped potential for renewable energy, which could provide opportunities for sustainable and inclusive development.

Energy Policy and Governance

Lesotho's energy policy and governance involve various stakeholders, including the government, private sector, civil society, and development partners. The country's energy sector is characterized by a high dependence on imported electricity, limited domestic energy production, and inadequate infrastructure. With a population of approximately 2 million and a per capita electricity consumption of 77 kWh, energy access remains a significant challenge in Lesotho.

The Lesotho Energy Policy 2015-2025 serves as the guiding framework for the sector. This policy emphasizes the sustainable development of energy resources, energy efficiency, and access to modern energy services. Additionally, the policy prioritizes the integration of renewable energy sources and the promotion of private sector participation in the energy industry.

The government's energy policy aims to increase access to clean and affordable energy, promote energy efficiency and conservation, and enhance the country's energy security. The government seeks to diversify the country's energy mix by increasing renewable energy penetration and reducing dependence on fossil fuels. To achieve this objective, the government has developed a renewable energy feed-in tariff, which provides incentives for private sector investment in renewable energy projects.

In addition to the government's policy, Lesotho has established energy governance institutions to promote effective energy sector management and development.

Despite these initiatives, Lesotho faces several challenges in its energy sector, including high electricity prices, inadequate transmission and distribution infrastructure, and limited human resource capacity. The government and its development partners have initiated several programs to address these challenges, including the Lesotho Lowlands Energy Access Project, which aims to increase electricity access and reliability in the country's lowlands region.

Overall, Lesotho's energy policy and governance initiatives are critical for achieving the country's socioeconomic development objectives.

Energy Access and Electrification

Lesotho faces significant challenges in providing energy access and electrification to its population, especially in rural and underserved areas. Here are some key aspects related to energy access and electrification in Lesotho:

1. Electricity Generation: Most of the Lesotho's electricity is imported from neighboring South Africa. The country also relies on hydroelectric power, with the Lesotho Highlands Water Project being a major source. However, the country faces intermittency issues due to seasonal variations in hydroelectric generation.

2. Rural Electrification: Access to electricity in rural areas of Lesotho is limited, with only around 25% of rural households having access to electricity. The rugged terrain and dispersed population make it challenging to extend the electricity grid to these areas. As a result, off-grid solutions such as solar home systems, mini-grids, and standalone systems are being promoted to improve energy access.

3. Renewable Energy Potential: Lesotho has significant renewable energy potential, particularly in solar and wind resources. Expanding the use of renewable energy can contribute to improving energy access and reducing reliance on imported electricity. Efforts are being made to harness this potential through the development of utility-scale solar and wind projects.

4. Energy Efficiency: Promoting energy efficiency is crucial in Lesotho to enhance energy access, reduce energy costs, and mitigate greenhouse gas emissions. Initiatives are being undertaken to raise awareness, promote energy-efficient technologies, and implement energy efficiency measures in various sectors like residential, commercial, and public buildings.

5. Policy and Regulatory Framework: The Lesotho government has recognized the importance of energy access and electrification and has developed policies and regulations to promote sustainable energy development. The National Energy Policy and the Rural Electrification Master Plan provide guidance for energy access initiatives, while the Electricity and Energy Regulations govern the energy sector's operation and development.

6. International Support: Lesotho receives support from international organizations and development partners to improve energy access and electrification. This

includes technical assistance, capacity building, and financial aid to implement and support energy projects and programs.

Improving energy access and electrification in Lesotho is crucial for reducing poverty, promoting economic growth, and enhancing living standards. Efforts to expand renewable energy, promote energy efficiency, and engage in partnerships and international cooperation are essential for achieving universal energy access and sustainable electrification in the country.

Challenges in the Energy Sector

Lesotho's energy sector faces a myriad of challenges, each impacting the country's ability to meet its growing energy demands and contribute to sustainable development. Among these challenges are:

i) Limited Capacity

The country's energy infrastructure and institutions grapple with limited capacity, particularly in terms of human resources. The existing workforce may lack the necessary skills and expertise to effectively manage and expand the energy sector. This limitation hampers the overall growth and development of the sector.

ii) Dependency on Hydropower

While hydropower stands as a clean and sustainable energy source, Lesotho's heavy reliance on it poses a significant challenge. The dependence on hydropower makes the energy sector vulnerable to climate variations and droughts. In times of reduced water availability, the country faces energy shortages, highlighting the need for diversification.

iii) Rural Electrification

Extending the electricity grid to remote and rural areas remains a formidable challenge. The logistical and financial implications of such an undertaking are substantial. Innovative solutions are required to overcome these challenges and ensure that even the most remote communities have access to reliable and affordable electricity.

Amidst these challenges, there are noteworthy opportunities and prospects for the country's energy sector. Some of them include the following:

iv) Renewable Energy Potential

Lesotho has significant renewable energy potential, particularly in the areas of hydroelectric power, solar power, and wind power.

Hydroelectric Power: Lesotho has several rivers and dams that are suitable for hydroelectric power generation. The Lesotho Highlands Water Project, for example, has developed a series of dams and tunnels that not only provide water for South Africa but also generate hydroelectric power. There are also other smaller rivers and dams across the country that could be utilized for hydropower generation.

Solar Power: Lesotho receives abundant sunlight throughout the year, making it an ideal location for solar power generation. The country has launched several projects to promote solar energy, including the installation of solar panels in schools and health centers. There is also potential for large-scale solar power plants, both on-grid and off-grid, to provide electricity to rural areas.

Wind Power: Lesotho has significant wind resources, particularly in the mountainous regions. Wind farms can be developed to harness this potential and generate electricity. The Department of Energy has identified several areas with strong wind resources, including the Mafeteng Plateau and the Maloti Mountains.

Biomass and Geothermal Energy: Although not as extensively explored as hydroelectric power, solar power, and wind power, Lesotho also has potential for biomass and geothermal energy generation. Biomass, such as agricultural waste and wood chips, can be used to produce electricity and heat. Geothermal energy, on the other hand, involves tapping into the Earth's natural heat for power generation.

The government of Lesotho recognizes the importance of renewable energy and had set a target to increase its use to 40% of the country's energy mix by 2020. This includes both grid-connected renewable energy projects and off-grid solutions for rural areas. In order to fully realize its renewable energy potential, Lesotho will need to build its capacities to attract investment, develop supportive policies, and develop the necessary infrastructure.

v) Regional Cooperation

Lesotho's participation in regional energy initiatives, such as the Southern African Power Pool (SAPP), presents a promising avenue for collaboration. Regional cooperation allows for the sharing of resources, expertise, and energy infrastructure. Through collaborative efforts, countries in the region can mitigate challenges and optimize the use of available resources for mutual benefit.

vi) Private Sector Participation

Encouraging private sector involvement through public-private partnerships (PPPs) is a key opportunity. Private sector entities bring not only financial investment but also specialized expertise and innovative technologies. Collaborating with the private sector can catalyze the development of projects, leading to more efficient and sustainable energy solutions.

vii) Snapshot of Energy Sector Capacity

The Government of Lesotho has acknowledged the need to develop and strengthen the energy sector in the country. The Lesotho National Energy Policy provides a roadmap for the development of the sector, focusing on increasing generation capacity, expanding access to electricity, promoting renewable energy, and improving energy efficiency. However, significant investments and collaborations are still required to enhance energy sector capacity and meet the growing energy demand in Lesotho.

The energy sector skills gap in Lesotho is a significant challenge for the country. There is a shortage of skilled professionals with specialized knowledge and expertise in the energy sector, particularly in areas such as renewable energy, energy technology, and energy management.

Limited Human Resources: Lesotho faces a shortage of professionals with technical skills in the energy sector, including engineers, technicians, and project managers. The lack of qualified personnel hampers the development and implementation of energy projects and initiatives.

Education and Training: Lesotho's education and training system has limited offerings and resources for energy-related disciplines. There is a lack of specialized academic programs and vocational training courses that focus on energy technology and renewable energy. As a result, there are few opportunities for individuals to acquire the skills and knowledge necessary for the energy sector.

Workforce Development: The absence of comprehensive workforce development strategies in the energy sector further exacerbates the skills gap. There is a need for targeted training programs and initiatives to build the capacity of the workforce in technical areas like solar power installation, energy management, and energy efficiency.

Policy and Institutional Framework: The absence of specific policies and institutions focusing on skills development in the energy sector hampers efforts to address the skills gap effectively. A dedicated framework for promoting and supporting skills development would help align training initiatives with the specific needs of the energy sector.

International Collaboration: Collaboration with international organizations, development partners, and other countries with advanced energy sectors can play a crucial role in addressing the skills gap in Lesotho. Partnerships can facilitate knowledge transfer, capacity building, and technical assistance.

The Lesotho government recognizes the importance of addressing the skills gap in the energy sector and has taken some steps to address the issue. Efforts have been made to collaborate with international organizations and development partners to support capacity-building initiatives. However, more sustained and targeted investments are needed to develop a skilled workforce that can meet the growing demands of Lesotho's energy sector.

1.2 Overview of the National Strategies and Policies

Lesotho has formulated key national strategies and policies to guide the development and management of its energy sector. These strategies and policies are crucial in shaping the country's energy landscape, ensuring sustainability, accessibility, and aligning with broader developmental goals. Following is an overview of some of the significant national strategies and policies related to Lesotho's energy sector:

a) National Strategic Development Plan II (NSDP II) Strategic Focus 2023/24 - 2027/28

The NSDP II serves as Lesotho's overarching development framework, outlining strategic priorities and interventions across various sectors, including energy. The plan emphasizes the importance of sustainable energy development, energy efficiency, and increased access to modern energy services. It aligns with

broader national development goals, placing energy at the center of efforts to improve the quality of life and drive economic growth.

b) Lesotho Energy Policy 2015-2025

The Lesotho Energy Policy is a comprehensive document that provides a roadmap for the energy sector. It emphasizes sustainable development, renewable energy integration, and increased access to energy services. The policy recognizes the significance of hydropower, solar, wind, and other renewable sources in diversifying the energy mix. It also promotes private sector participation and outlines strategies for addressing challenges in the sector.

c) Lesotho Renewable Energy Policy 2013

This policy specifically focuses on renewable energy, acknowledging the pivotal role it plays in mitigating climate challenges and enhancing energy security. The REP outlines targets for the share of renewable energy in the overall energy mix and sets clear strategies for the development of renewable projects. It also addresses regulatory frameworks, financial mechanisms, and capacity building in the renewable energy sector.

d) Energy Efficiency Strategy (2015)

The Energy Efficiency Strategy aims to reduce energy consumption and improve energy efficiency across various sectors, including buildings, transportation, and industry. It includes measures such as promoting energy-efficient appliances, conducting energy audits, and implementing energy management systems.

e) Electrification Master Plan

Ensuring access to electricity in rural areas is a priority for Lesotho. The Rural Electrification Master Plan provides a roadmap for extending the electricity grid to remote regions and implementing off-grid solutions. It considers factors like technology suitability, cost-effectiveness, and community engagement in electrification projects.

f) Rural Electrification Policy (2019)

The Rural Electrification Policy focuses on increasing access to electricity in rural areas of Lesotho. It aims to improve the livelihoods of rural communities by providing them with reliable and affordable electricity services through the expansion of grid infrastructure and the promotion of off-grid solutions.

g) Regional Cooperation and Integration

Lesotho actively participates in regional energy initiatives, including the Southern African Power Pool (SAPP). Regional cooperation allows for the sharing of energy resources, infrastructure, and expertise. It promotes energy trade, enhances grid reliability, and contributes to the overall energy security of the region.

1.3 Overview of the Institutional Mandates in the Energy Sector

Lesotho's energy sector functions within a multifaceted institutional framework carefully crafted to govern, regulate, and propel the country's energy objectives. The array of institutional mandates within this sector encompasses tasks such as policy formulation and project implementation dedicated to fostering sustainable energy development. This overview delves into the prominent institutions, including the Lesotho Electricity Generation Company, elucidating their roles and contributions to shaping the dynamic landscape of energy in Lesotho.

a) Department of Energy (DoE)

The DoE is currently serving as the central government agency responsible for the overall coordination and management of energy affairs in Lesotho. Its mandate spans policy formulation, planning, and regulation to ensure a sustainable, reliable, and affordable energy supply. The DoE plays a pivotal role in aligning the sector with national development objectives, as outlined in the National Strategic Development Plan II.

The Department of Energy in Lesotho has the mandate to oversee the development, management, and regulation of the country's energy sector. Its specific responsibilities include:

1. Energy Policy Formulation: The department is responsible for formulating and reviewing the national energy policy and strategy. It develops plans, programs, and targets that guide the development and management of the energy sector in Lesotho.

2. Energy Sector Development: The department plays a key role in promoting the development of Lesotho's energy resources. This includes identifying and assessing potential energy resources, both conventional and renewable. It also

works to attract private sector investment in the energy sector to stimulate growth and diversification.

3. Energy Sector Regulation: The department is responsible for regulatory oversight of the electricity and petroleum sectors in Lesotho. It ensures compliance with relevant laws and regulations, including licensing of energy operators and enforcing quality and safety standards.

4. Energy Access and Rural Electrification: One of the department's core objectives is to improve access to modern energy services, particularly in rural and underserved areas. It works to expand electricity infrastructure and promote off-grid solutions such as mini-grids and standalone systems. The department collaborates with development partners to implement rural electrification programs.

5. Energy Efficiency and Conservation: The department promotes energy efficiency practices and technologies across various sectors, including residential, commercial, and industrial. It provides energy efficiency guidelines, conducts awareness campaigns, and supports projects aimed at reducing energy consumption and greenhouse gas emissions.

6. International Cooperation: The department represents Lesotho in regional and international energy forums and collaborates with other countries and organizations to advance energy sector development. It participates in initiatives aimed at fostering energy security, renewable energy deployment, and regional power trade.

The Department of Energy in Lesotho plays a crucial role in ensuring the sustainable development and efficient management of the country's energy

resources. Its mandate encompasses policy formulation, sector development, regulation, energy access, efficiency, and international cooperation.

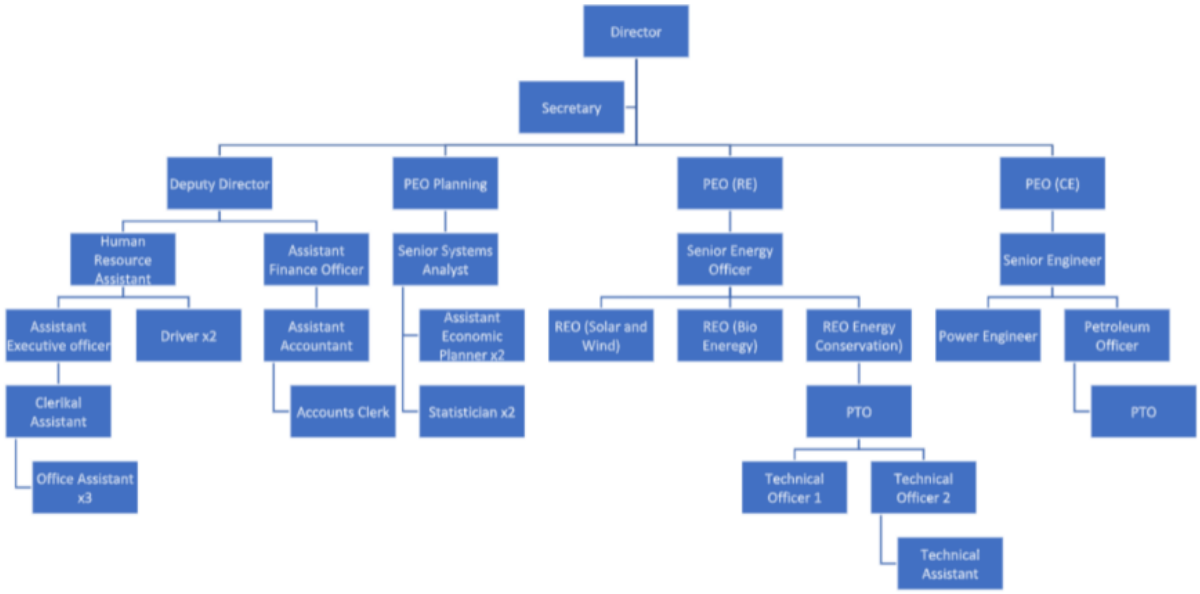


Figure 1: Current Organizational Structure of DoE

Under the draft Energy Bill recommended reforms, it has been intimated that DoE will be restructured to an Energy Commission with a proposed structure as follows:

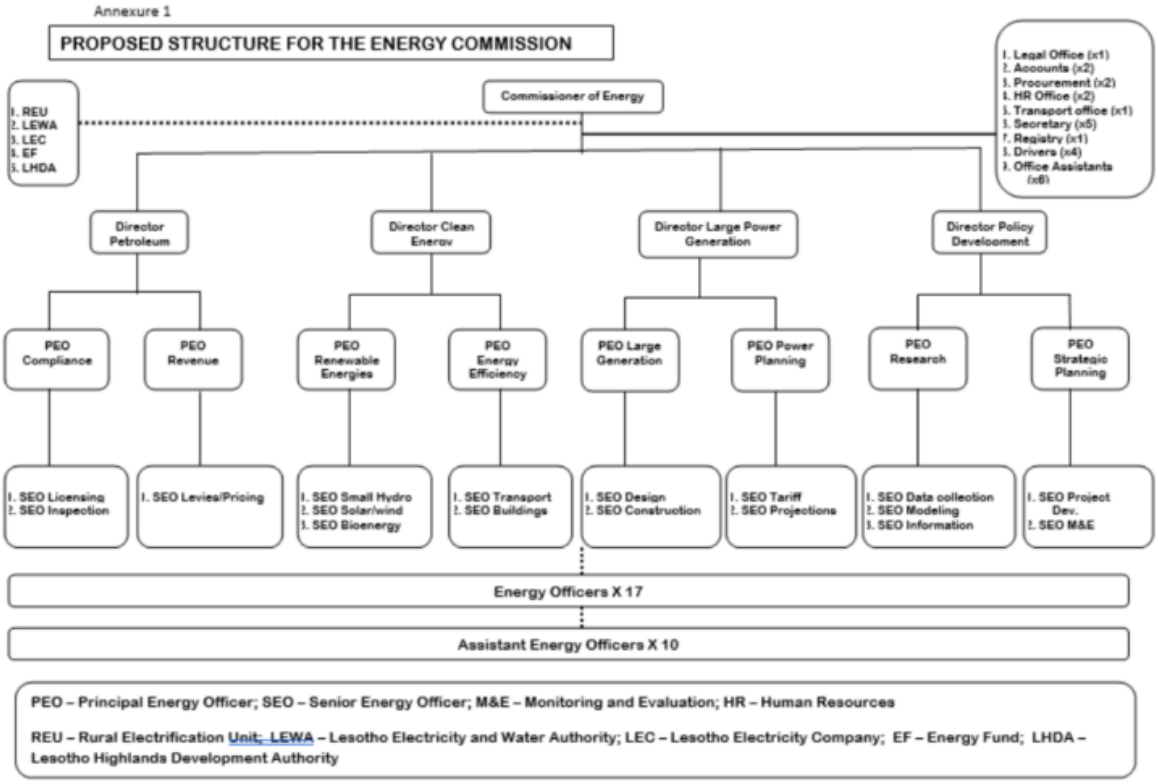


Figure 2: Proposed Structure for the Energy Commission

b) Lesotho Electricity and Water Authority (LEWA)

LEWA is a regulatory body overseeing the electricity and water sectors. While not exclusively an energy-focused institution, its role in regulating the electricity sub-sector is crucial for ensuring efficiency, reliability, and compliance with national standards. The institution is tasked with Licensing and regulation of electricity providers, Monitoring and enforcing compliance with sector regulations as well as Promoting consumer interests and ensuring fair competition.

c) Rural Electrification Unit (REU)

The REU focuses on extending electricity access to rural and underserved areas. Its mandate aligns with national goals of inclusivity and equitable energy distribution. It is tasked with Planning and implementing rural electrification projects, identifying suitable technologies for off-grid solutions and collaborating with stakeholders to enhance rural energy access.

d) Lesotho Electricity Company (LEC)

As the primary electricity utility in Lesotho, LEC is responsible for power transmission, and distribution and supply. Its mandate is critical for ensuring a reliable electricity supply across the country. It's mandate spans Power generation and transmission, distribution of electricity to end-users and infrastructure maintenance and development.

e) Ministry of Energy

The Ministry provides policy oversight and strategic leadership over the broader energy sector. The Ministry also oversees policy development for the energy sector including energy planning as well as coordination with relevant ministries for a holistic approach.

2. CONCEPTUAL FRAMEWORK FOR THE ASSIGNMENT

This conceptual framework is designed to guide the systematic exploration of the skills landscape within the DoE and the subsequent development of a targeted capacity-building plan. This Assignment also takes into account inputs from complementary work under the framework of the Support to Energy Sector Reform project.

i. Skills Audit

Input variables include employee demographic information, job-specific Information like Department, type of employment, and field of specialization. The process in regard to questionnaire and In-Depth Interviews focused on gathering existing information on skills, training history, and perceived skills gaps, as well as data Processing and quantitative analysis. (Data was collected through the use of self-administered questionnaires and face-to-face interviews. Information gathered focused on information on skills, training history and perceived skills gap. Qualitative and quantitative data analysis was performed).

The output on the other hand is the Skills Inventory in form of comprehensive overview of the current skill sets within the DoE as well as the Identified skills gaps projecting a clear understanding of areas where skills are lacking or need enhancement.

ii. Capacity Building

Input Variables here include Identified Gaps from the Skills Audit articulating Specific skills and knowledge areas requiring development. It also shows

individual Employee Training preferences such as s interest in exchange programs and benchmarking tours.

The process included the Skills Development Plan tailored to address identified gaps. This will be integrated with the Work Plan aligning the capacity-building plan with the DoE's annual work plan and budget.

The Output is Capacity Building Programs designed to enhance technical, management, and soft skills of DoE employees. This will also be integrated into the organizational workflow.

iii. Significance of the Framework

The framework emphasizes the importance of evidence-based decision-making by grounding interventions in the data derived from the skills audit. By integrating skills audit, capacity building, and organizational transformation, the framework ensures a holistic and strategic approach to capacity development at DoE.

The iterative nature of the framework ensures adaptability and sustainability, allowing for continuous improvement aligned with changing organizational and sectoral dynamics.

3.1. Literature Review and stakeholder consultations

Lesotho's Department of Energy (DoE) is undergoing a transformative shift from a traditional secretariat to a commission with strengthened executive authority. This evolution demands a strategic focus on capacity development to align the workforce with the expanded mandate and structural changes. This literature review delves into key concepts, challenges, and best practices in capacity development within the context of organizational transformation, emphasizing the unique case of the DoE.

1. Capacity Development in Energy Institutions:

Capacity development is a multifaceted process crucial for energy institutions grappling with dynamic challenges. Insights from the International Energy Agency (IEA) highlight the need for continuous learning to address technological advancements, policy changes, and the imperative for sustainability (IEA, 2018). The energy sector's complexity underscores the significance of building competencies within the workforce.

2. Organizational Transformation in Energy Governance:

Organizational transformation is a global trend in energy governance. The work of Farazmand (2018) emphasizes the need for energy institutions to adapt

structurally and functionally to align with changing energy landscapes. The DoE's transition from a secretariat to a commission aligns with this global shift, necessitating a strategic approach to capacity development.

3. Challenges in Capacity Development during Organizational Transformation:

Research by Cummings and Worley (2014) emphasizes that organizational change often encounters resistance, skill gaps, and potential disruptions in service delivery. Identifying challenges early in the transformation process is crucial. The DoE must address these issues to ensure a smooth transition and maximize the effectiveness of its workforce.

4. Best Practices in Capacity Development:

There are several benchmarks and best practices for skills development in the energy sector. Some of them include:

- National Apprenticeship Programs: Apprenticeship programs offer a hands-on learning experience to develop skills in the energy sector. These programs often involve a combination of classroom learning and on-the-job training and can lead to recognized qualifications.
- Industry-specific Certification: Certifications, such as welding or electrician certification, provide a standard of excellence in skill development and help to ensure that the workforce is equipped to handle energy sector tasks safely and efficiently.
- On-the-Job Training: On-the-job training provides an opportunity for workers to learn practical skills under the guidance of experts in the field. This can help to foster skill development and improve the competency of the workforce.
- Career Development Programs: Offering career development programs that allow employees to advance their skills and knowledge can increase worker retention and help to cultivate expertise in the field.
- Collaboration with educational institutions: Collaboration between industry leaders and educational institutions can provide students with a well-rounded education that is tailored to the energy industry and the current needs of the workforce. This can help to meet the demands of the industry and ensure that workers are equipped with the right skills to succeed.
- Continued Education and Professional Development: Providing opportunities for continued education and professional development can help the workforce keep up with the latest advancements and changes in the energy industry. This also helps to improve the overall quality of the workforce and enhance the competitiveness of the sector.

Overall, a strong focus on skills development and training is crucial for the long-term sustainability and growth of the energy sector, and these best practices can serve as benchmarks for achieving success in this area.

Several countries have implemented successful capacity development strategies in the energy sector. A few notable examples include:

- Germany: Germany has been a leading country in energy transition, known as the Energiewende. They have invested heavily in capacity development programs to support the transition to renewable energy sources. The country has established a robust vocational training system, which incorporates practical training and education in renewable energy technologies such as solar, wind, and biomass. This has helped to build a skilled workforce capable of supporting the renewable energy sector.
- Norway: Norway is recognized for its expertise in offshore oil and gas exploration and production. The country has developed a comprehensive capacity development strategy to build a skilled workforce and has established various training and research centers in partnership with industry stakeholders. These initiatives have helped to ensure a competent workforce that can operate and maintain offshore energy infrastructure effectively.
- United States: The United States has put a significant emphasis on capacity development in the energy sector. Programs such as the National Training and Education Resource (NTER) provide comprehensive training resources and certifications for various energy-related professions. Additionally, the Department of Energy's Workforce Development for Teachers and Scientists (WDTS) program focuses on training educators and researchers to facilitate the development of the next generation of energy professionals.
- United Arab Emirates: The UAE has a strong focus on capacity development in the renewable energy sector. The country has established the Masdar Institute of Science and Technology, which offers specialized degree programs in sustainable energy. Additionally, the UAE has partnered with various international organizations to provide training and capacity-building programs for renewable energy professionals.
- Denmark: Denmark has been a global leader in renewable energy, particularly within wind power. The country has implemented comprehensive training programs and established dedicated training centers, such as the Danish Wind Power Academy, to develop expertise in wind energy. Denmark's capacity development initiatives have contributed to the growth of their wind

energy industry and positioned them as a leading exporter of wind turbine technology.

These countries serve as examples of best practices in capacity development in the energy sector, demonstrating the importance of investing in education, training, and research to support sustainable and efficient energy systems.

5. Impact of Organizational Culture on Capacity Development:

The transformation of the DoE is not solely structural but also cultural. Schein (2010) asserts that organizational culture significantly influences capacity development efforts. Aligning initiatives with the existing organizational culture fosters a conducive environment for learning and adaptation. Understanding and leveraging the DoE's culture is pivotal for successful capacity development.

6. Regional and International Perspectives on Capacity Development:

Lesotho's energy sector operates within a regional and international context. Lessons from the World Bank's experiences in supporting capacity development in energy institutions (World Bank, 2015) stress the importance of collaborative approaches. The DoE can benefit from regional partnerships, knowledge exchange, and benchmarking to enhance its capacity development initiatives.

7. Monitoring and Evaluation of Capacity Development Programs:

Continuous monitoring and evaluation are integral to the success of capacity development initiatives. The work of Kirkpatrick (1994) provides a widely accepted framework for assessing the impact of training programs. Establishing robust frameworks for feedback mechanisms, performance indicators, and adaptability is crucial for the DoE's ongoing transformation.

3. BENCHMARKING AND GOOD PRACTICES OF SIMILAR ASSIGNMENTS

This assignment was also among others informed by some good practices of conducting skills audits and designing skills development strategies. A few examples that can be cited include: (i) the Energy Workforce Skills Audit and Workforce Development Strategy, Rwanda (2015); (ii) Energy Sector Skills Audit, Rwanda (2017/2018) and (iii) the South African Energy Skills Roadmap 2023; (iv) the Strategic Capacity Building Initiative (SCBI), Rwanda, 2011 – to-date and (v) The Five-Year Priority Skills Development Strategy, Rwanda (2013-2018).

There are several other countries that are recognized for their effective skills development programs in the energy sector. A few notable examples include:

- Canada: Canadian energy companies are required to invest in skills development programs through the Canadian government's Skills Development Fund. This fund supports a range of training programs at all skill levels, from entry-level apprenticeships to advanced technical diplomas and degrees. Canada has also established several energy-specific training programs, such as the Oil Sands Technical Apprentice Program, which is designed to develop the skills of workers in the oil sands industry.
- Australia: The Australian government has implemented skills development programs in partnership with energy companies through initiatives such as the Energy Skills Australia Program. This program focuses on developing the skills of energy workers in areas such as renewable energy, energy efficiency, and emerging technologies. Australia has also established the National Energy Productivity Plan, which includes a focus on developing the skills of energy professionals to support the transition to a more energy-efficient economy.
- United Kingdom: The UK has implemented several programs to develop and maintain the skills of workers in the energy sector. One example is the Energy & Utility Skills Council, which provides training and certification programs for workers in the energy, water, and waste management industries. The UK government has also established the National Skills Academy for Nuclear to support the development of a skilled workforce in the country's nuclear industry.
- Singapore: Singapore has established several training institutions, such as the Singapore Polytechnic Energy Academy and the Temasek Polytechnic School of Engineering, which provide specialized training programs for energy professionals. The country has also partnered with international organizations to provide training in emerging technologies, such as offshore wind energy, to support the growth of these industries in Singapore.
- Japan: Japan has established specialized training programs, such as the Renewable Energy Fundamentals Certificate Program, to support the development of a skilled workforce in the renewable energy sector. The country has also established the Institute of Energy Economics, Japan, which provides research and education in the energy sector and contributes to the development of energy policies.

These countries serve as examples of best practices in skills development in the energy sector, demonstrating the importance of continuous education and training to support a competent workforce that can meet the evolving needs of the industry.

4. APPROACH AND METHODOLOGY

This assignment employed a well-structured and systematic approach. The following methodology outlines the steps and strategies that were used to carry it out:

In-Depth Analysis of Existing Documentation

The undertaking commenced with conducting a comprehensive review of all relevant documents, including the EDF 11 funding agreement, National Strategic Development Plan (NSDP), Lesotho Energy Policy, and previous reports and studies related to the energy sector among others. These provided a fair understanding of the context, objectives, and challenges of the project.

An analysis of the findings and recommendations of the Scoping Mission conducted in 2014 also provided the baseline to evaluate the progress so far made on the proposed interventions anticipated by this assignment. This provided the opportunity to identify any changes in the energy sector landscape and assessed the effectiveness of previous initiatives. The in-depth document analysis set the foundation upon which to identify the capacity gaps in the energy sector and required interventions to address them.

Stakeholder Engagement

A thorough consultative process was undertaken with DoE; Lesotho Electricity Company (LEC) and Lesotho Electricity and Water Authority (LEWA). These consultations were pertinent in gathering insights, concerns, and priorities regarding existing capacity gaps which have in one way or the other, impeded project progress. These were pivotal in informing the capacity building plan for DoE.

Creation of the Skills for Energy Profile

An initial list of skills sets and competencies relevant to DoE was established based on good practices in some similar institutions as well as feedback from self-administered questionnaires and stakeholder consultations. DoE can continuously build on this initial proposal to come up with a comprehensive skills profile for the Department and later Commission. The following narrative will help to shape the job descriptions In DoE as well as the required skills that formed the basis to compile the skills inventory.

- Technical Knowledge: Strong understanding of energy systems, including renewable energy technologies, fossil fuel systems, and energy storage solutions. Proficiency in analyzing technical data and implementing energy management strategies.
- Energy Efficiency: Ability to identify and implement energy efficiency measures in various sectors, such as buildings, manufacturing, and transportation. Knowledge of energy auditing processes and experience in developing and implementing energy conservation measures.
- Renewable Energy: Familiarity with different types of renewable energy sources, including solar, wind, hydro, and biomass. Understanding of renewable energy policies, incentives, and financing options. Experience in project development, including site assessment, feasibility study, and technology selection.
- Energy Policy and Regulation: Knowledge of energy policy and regulatory frameworks at local, national, and international levels. Ability to analyze legislation, identify compliance requirements, and develop strategies to meet regulatory obligations. Understanding of carbon pricing mechanisms and emissions trading schemes.
- Financial Analysis: Proficiency in conducting financial analysis for energy projects, including cost-benefit analysis, payback period calculations, and return on investment assessments. Ability to assess project feasibility, calculate financial indicators, and prepare financial proposals for potential investors or financing institutions.
- Energy Management: Skills in energy management techniques, including energy data analysis, benchmarking, and performance monitoring. Experience in developing and implementing energy management plans, setting energy reduction targets, and conducting energy awareness campaigns.
- Project Management: Ability to manage energy projects from initiation to completion, including budgeting, scheduling, risk assessment, and stakeholder engagement. Proficiency in coordinating project teams, monitoring progress, and ensuring adherence to project objectives.
- Communication and Stakeholder Engagement: Strong oral and written communication skills to effectively convey complex energy concepts to various stakeholders, including executives, employees, government officials, and the general public. Experience in facilitating workshops, presenting research findings, and engaging in stakeholder consultations.

- Data Analysis and Reporting: Proficiency in collecting and analyzing energy data using various software and tools. Ability to prepare comprehensive reports, including energy performance indicators, greenhouse gas emissions inventories, and sustainability assessments.
- Environmental and Social Responsibility: Understanding of the environmental and social impacts of energy production and consumption. Skills in developing sustainable energy strategies that minimize adverse effects on ecosystems, communities, and human health. Experience in conducting environmental and social impact assessments and integrating sustainability principles into energy projects.

The following table further expounds on the skills profile that was generated from the preceding exercise covering a range of skills and competencies relevant to the DoE as obtained from stakeholder consultation and review of relevant literature. It outlines the specific skills and competencies within various categories and subcategories in the DoE sector. It also indicates which employees or roles are the primary targets for each skill.

When approved, it will serve as a valuable reference when conducting the skills audit to assess the proficiency of employees in these areas.

Table 1: Energy Skills Profile for DoE

Skill Category	Skill Subcategory	Specific Skills/Competencies	Targeted Employees
Technical Skills	Energy Generation	Power plant operation and maintenance	• Operators, • Technicians
	Renewable Energy	Solar Wind Biogas Off Grid Energy Access	• RE Engineers • RE Technicians
		Technical Guidelines for Off-Grid Products	• RE Engineers • RE Technicians
	Energy Distribution	Grid management and maintenance On Grid Power Sector planning and investment	• Grid Operators, • Technicians
	Electrical Engineering	Electrical circuit design and analysis	Electrical Engineers

		Power system modeling and analysis	Power Engineers
		Substation operation and maintenance	• Substation Technicians, • Engineers
	Mechanical Engineering	Mechanical design and maintenance	Mechanical Engineers
	Control Systems	PLC programming and troubleshooting	• Control Technicians, • Engineers
		SCADA system operation	• SCADA Operators, • Engineers
	Energy Efficiency	Energy audits and efficiency analysis	• Energy Auditors, • Analysts
		Building energy management	• Energy Managers, • Engineers
	Petroleum, Oil & Gas	Petroleum Products management	• Petroleum Engineers • Oil & Gas Engineers
	Power systems	Power system planning and investment Energy Economics	• DoE Management
Soft Skills	Problem Solving	Analytical thinking and root cause analysis	All Employees
	Communication	Effective verbal and written communication	All Employees
	Teamwork	Collaboration in cross-functional teams	All Employees
	Leadership	Leadership and project management	• Supervisors, • Managers
	Time Management	Efficient time and task management	All Employees
	Adaptability	Adaptation to changing technologies	All Employees
	Decision Making	Sound decision-making in high-pressure situations	Managers
Leadership Skills	Strategic Planning	Developing and executing energy sector strategies	Managers
	Change Management	Leading organizational change initiatives	• Managers, • Change Leaders
	Policy Advocacy	Influencing energy policy decisions	• Advocacy Specialists, • Managers

	Risk Management	Identifying and mitigating energy-related risks	• Risk Managers, Engineers
	Sustainability	Promoting sustainable energy practices	• Sustainability Managers, • Engineers
Regulatory and Compliance	Regulatory Compliance	Knowledge of energy sector regulations and compliance	• Compliance Officers, Managers
	Environmental Standards	Adherence to environmental standards and regulations	Environmental Specialists
	Safety Procedures	Ensuring workplace safety in energy operations	• Safety Officers, • Technicians
IT and Data Analysis	Data Analytics	Data analysis for energy consumption and trends	• Data Analysts, • Engineers
	Energy Management Software	Proficiency in using energy management software	• Software Specialists, • Engineers
Finance and Economics	Budget Management	Managing budgets for energy projects	• Finance Managers, • Engineers
	Cost Analysis	Cost-benefit analysis for energy investments	• Financial Analysts, • Managers
Environmental Impact	Carbon Reduction	Implementing carbon reduction strategies	• Environmental Engineers, • Managers
	Sustainable Practices	Promoting sustainable energy practices	• Sustainability Specialists, • Managers
Interpersonal Skills	Customer Relations	Building and maintaining customer relationships	Customer Relations Specialists
	Conflict Resolution	Resolving conflicts among team members	• Conflict Resolution Specialists
Regulatory Reporting	Compliance Reporting	Preparing and submitting regulatory reports	• Compliance Officers, • Managers
Project Management	Project Planning	Developing energy project plans	• Project Managers, • Engineers
	Execution	Managing project execution within budget and schedule	• Project Managers, • Engineers
	Evaluation	Post-project evaluation and lessons learned	• Project Managers, • Engineers

Additional Skills Sets

Skill Category	Skill Subcategory	Specific Skills/Competencies	Targeted Employees
IT	System Management	• Network Administration, • Database Management, • IT Security	• IT Staff, • System Administrators
Statistics	Statistical Analysis for Energy	• Statistical Analysis, Data Interpretation	• Analysts, • Researchers
Energy Modeling	Energy System Modeling	• Energy System Modeling, Simulation	• Energy Analysts, • Engineers
GIS	Geospatial Analysis for Energy	• Geographic Information Systems, • Spatial Analysis	• GIS Specialists, • Planners
Petroleum	Petroleum	• Reservoir Engineering, • Oil Extraction Techniques	• Petroleum Engineers
Bioenergy	Bioenergy	• Biomass Conversion, • Biofuel Production	• Bioenergy • Researchers, • Engineers
Support Functions	Legal	• Contract Law, • Regulatory Compliance	• Legal Professionals
Support Functions	Administration	• Office Management, • Record Keeping	• Administrative Staff
Support Functions	Procurement	• Supply Chain Management, • Vendor Negotiation	• Procurement Specialists
Support Functions	Human Resources	• Employee Relations, • Talent Acquisition	• HR Professionals

Design Assessment Tools

We further developed data collection tools, which included a comprehensive questionnaire as well as a structured tool for in-depth interviews with key informants in stakeholder institutions. Effort was made to ensure that the assessment methods aligned with the identified skills and competencies in DoE.

a. Online Questionnaire

The development and administration of the questionnaire involved a strategic and technologically driven approach. Google Forms was selected as the primary tool for data collection due to its accessibility, user-friendly interface, and the need for remote administration.

The tool was meticulously designed to capture comprehensive insights into the skills, training needs, and capacity development requirements of DoE employees. The questions were categorized into sections aligning with specific skill sets, experience levels, and organizational needs. Clear instructions and a mix of open-ended and multiple-choice questions were incorporated to gather qualitative and quantitative data.

b. In-depth Interview Tool

The development and administration of the in-depth interview tool involved careful considerations to ensure the depth and richness of the data collected. The tool was strategically designed, and its administration meticulously planned, taking into account several key considerations.

The tool was crafted with open-ended questions to allow respondents the freedom to express themselves in detail. This approach aimed at eliciting nuanced responses and uncovering insights that might not be captured through closed-ended questions.

The questions were closely aligned with the objectives of the assignment, focusing on skills, training needs, challenges faced, and suggestions for capacity development. This ensured that the data collected directly contributed to addressing the objectives.

The tool was also designed to be flexible to accommodate variations in responses and adapt to the unique perspectives of each interviewee. This flexibility was crucial in capturing the diverse experiences and opinions of DoE employees.

Participants for the in-depth interviews were purposefully selected to represent various levels of the organizational hierarchy, different departments, and diverse roles within the DoE. This approach ensured a comprehensive understanding of skills and capacity needs across the department.

Interviews were conducted in a professional yet relaxed setting to encourage open and candid responses. The choice of setting aimed to create an atmosphere where participants felt comfortable sharing their experiences and perspectives.

Simultaneously, note-taking was employed to capture non-verbal cues and contextual information that might not be evident in the transcripts alone.

In-depth interviews were chosen to delve deeply into the experiences, perceptions, and challenges faced by DoE employees. The tool allowed for a nuanced exploration of individual experiences, providing a rich source of qualitative data.

The interviews were also designed to complement the quantitative data collected through the survey. While the survey provided a broader overview, in-depth interviews allowed for a more profound understanding of specific issues and contexts.

The tool facilitated the exploration of qualitative aspects, such as individual narratives, opinions, and subjective experiences. This qualitative depth added a layer of understanding that quantitative data alone might not capture.

c. Data Processing, Analysis and Reporting

The collected data underwent a systematic process of management, analysis, and reporting. The utilization of SPSS was a strategic choice, ensuring robust statistical analysis and comprehensive reporting. SPSS was used for analysis because it is widely recognized for its statistical rigor and reliability. Its ability to handle complex statistical analyses ensures that the results obtained are robust and statistically sound. The software is versatile, capable of analyzing a wide range of data types and conducting both basic and advanced statistical analyses. Its versatility was crucial for exploring diverse aspects of the skills audit data. It generates clear and structured outputs, facilitating the interpretation of statistical results. This feature was instrumental in preparing a comprehensive report that communicated findings effectively.

Data Processing involved Data Cleaning whereby raw data, including survey responses and interview transcripts, underwent thorough cleaning to address any inconsistencies, missing values, or errors. This step is aimed at ensuring the accuracy and reliability of the dataset.

Responses were then coded and categorized systematically, transforming qualitative data into a format suitable for statistical analysis. This process facilitated the integration of survey and interview data for a holistic examination.

Cleaned and coded data were entered into the SPSS software, ensuring a standardized and organized dataset for subsequent analysis.

Basic descriptive statistics, including frequencies and means, were generated to provide an initial overview of the dataset. This step facilitated a preliminary understanding of the distribution and characteristics of the variables.

The dataset was segmented and stratified based on relevant variables, allowing for a more nuanced analysis of specific groups or categories. This approach was particularly valuable in identifying variations in skills and capacity needs across different organizational levels and departments.

The results obtained from SPSS analyses were compiled systematically, ensuring a clear presentation of findings. Visual aids, such as charts and graphs, were incorporated to enhance the interpretation of quantitative data.

The findings were interpreted in the context of the objectives of the skills audit, providing insights into the skills landscape, capacity needs, and training preferences within the DoE.

The quantitative findings were contextualized with qualitative insights obtained from in-depth interviews, providing a comprehensive understanding of the skills and capacity dynamics within the department.

5. SUMMARY OF FINDINGS FROM SKILLS AUDIT

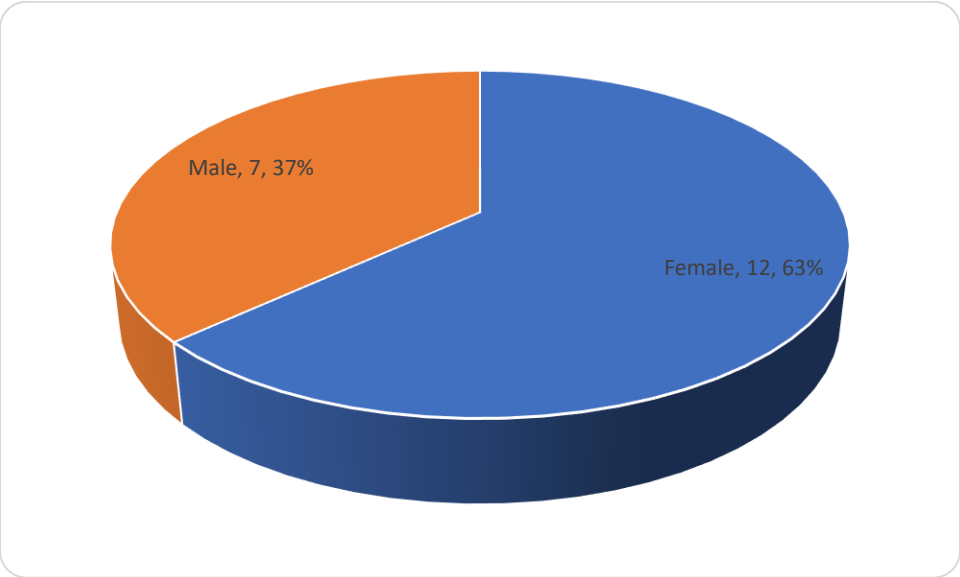
The following section provides insights into Training Needs disaggregated based on different Factors. It provides a nuanced understanding of the specific requirements for technical, management, and soft skills among different groups within the Department of Energy. Addressing these variations will be crucial in designing effective capacity building programs tailored to the specific needs of each segment.

Characteristics of Respondents

Gender Distribution

Results exhibit a higher representation of female respondents, constituting 63% of the total respondents, compared to male, who make up 37%. While there is a gender imbalance, it's important to note that these percentages provide a snapshot of the respondents and their perspectives.

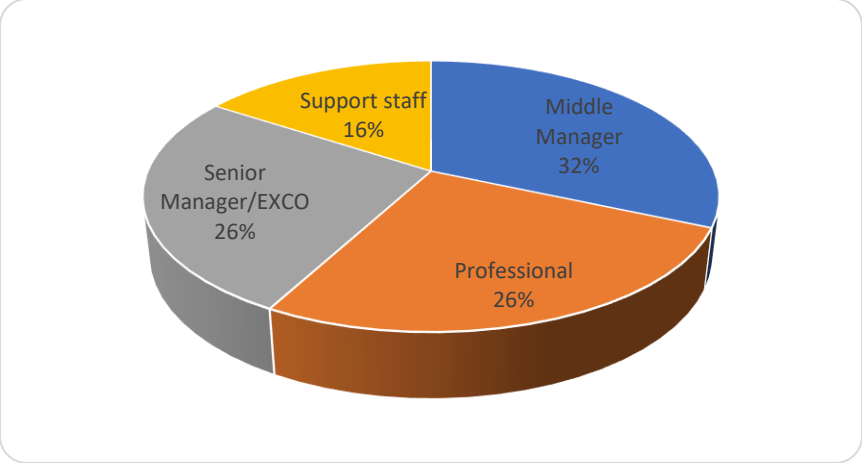
Figure 3: Staff Gender Distribution



Distribution by Position

The respondents in the survey are distributed across various positions within DoE. The majority, comprising 32%, hold middle management positions, followed by senior managers and professionals who constitute 26% each respectively of the respondents, and then support staff who make up the remaining 16%.

Figure 4: Distribution of Respondents by Position



Distribution by Type of Employment

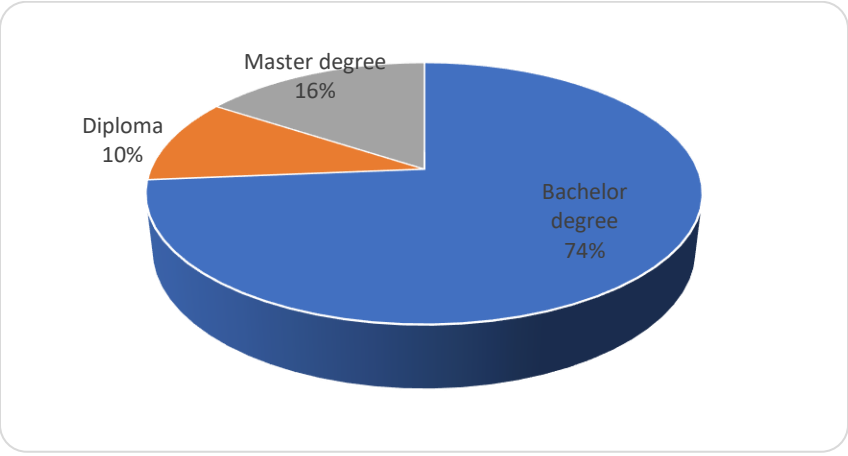
The majority of respondents, constituting 84%, are in permanent positions, indicating a stable and long-term commitment to the organization. Additionally, 16% of respondents are on temporary contracts.

The high percentage of permanent appointees suggests a stable workforce, which could impact the design and implementation of long-term capacity development plans.

Distribution by Education Level

The majority of respondents, constituting 74%, hold a bachelor's degree, indicating a foundational level of education among the workforce. Additionally, 16% of respondents hold a master's degree, reflecting a higher level of education and expertise. A smaller proportion, 10%, holds a diploma.

Figure 5: Distribution of Respondents by Education Level



Distribution by Employees' Experience

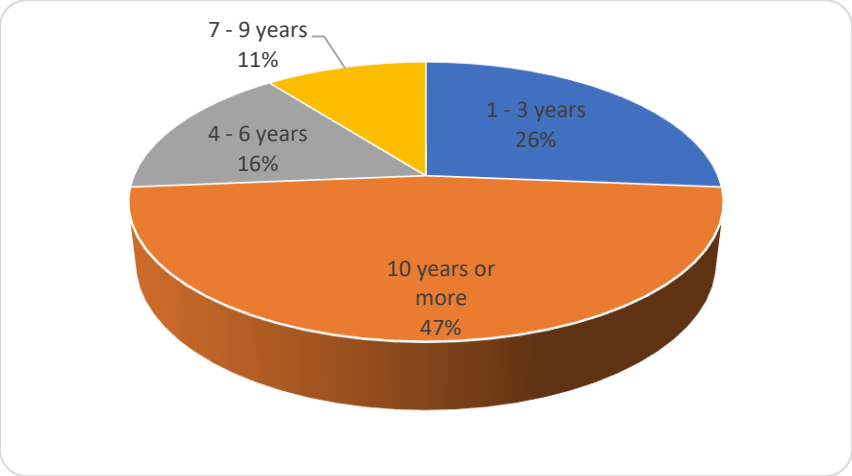
Understanding the distribution of employees by years of experience provides insights into the workforce's collective professional journey, enabling strategic planning for skill development and mentorship initiatives.

The DoE workforce exhibits diverse levels of experience, as indicated by the distribution across different experience brackets. 26% of respondents fall within the bracket of 1-3 years, representing a segment with relatively limited professional experience.

16% of respondents have worked for 4-6 years meaning they have accumulated moderate experience, positioning them as mid-level professionals. 11% fall into the category of 7-9 years, indicating a smaller group with a slightly more advanced level of experience.

The majority however, constituting 47%, boasts extensive experience of 10 years or more, signifying a seasoned group of professionals with significant tenure in the organization.

Figure 6: Distribution by Employees' Experience



Skills Inventory

Technical Skills Needs

The skills audit reveals a substantial demand for Technical Skills among employees, with 72% expressing a specific need for enhancing their technical competencies.

This indicates a pervasive recognition of the importance of technical expertise in fulfilling job responsibilities and staying abreast of industry advancements.

Specifically, 60% of Senior Managers acknowledge a need for advanced technical skills, aligning with the strategic nature of their roles. 68% of Middle Managers identified gaps, emphasizing the importance of technical acumen even in managerial positions, while 62% of professionals signaled a need for improvement, highlighting the necessity of specialized knowledge in professional roles, and 55% of Support Staff also expressed a desire for enhanced technical skills, indicating cross-functional technical demands even in support roles.

Another important highlight is that 65% of permanent employees expressed the need for continuous skills development, emphasizing the long-term technical demands. This compares with 60% of temporary contract employees in temporary roles, indicate a skills gap, showcasing the immediate need for skill reinforcement. The course of intervention has to be established based on a thorough needs assessment.

In regard to the field of specialization, 63% of staff with ICT roles signaled a need for improvement, highlighting the dynamic nature of the Information and Communication Technology field. 62% in the field of Electrical Engineering, also identified a skills gap, emphasizing the need for specialized technical knowledge in engineering.

In finance, 58% expressed the need for improvement, while in Conservation Ecology, 65% express the need, indicating the importance of technical knowledge in both ecological roles.

Management Skills Needs

Analysis of the data indicates a considerable demand for Management Skills among employees, with 64% expressing a specific need for enhancing their management skills. This suggests a widespread acknowledgment of the importance of managerial competencies for effective leadership and career advancement.

Specifically, 50% of Senior Managers expressed the need for leadership development, emphasizing ongoing leadership requirements in DoE. This compares with 58% Middle Managers, 52% Professionals, and 55% Support Staff who identified gaps showcasing the need for refined leadership in managerial

and professional positions as well as in support roles which in essence is an organization-wide need for effective leadership skills.

From the perspective employment tenure, 55% of permanent staff expressed the need for continuous leadership development, underlining long-term leadership requirements. On the other hand, 58% of temporary contract staff indicated management skills gap, emphasizing the immediate need for effective leadership in temporary roles as well.

In regard to the field of specialization, 53% of ICT staff indicated the need for improvement, highlighting the importance of effective leadership in technology-driven fields. This compares with 52% in Electrical Engineering disciplines, 55% in Finance and 50% in Conservation Ecology all expressed the gap requiring improvement, showcasing the wide need for enhancing management skills which is very important for effective leadership across DoE.

Soft Skills Needs

The analysis of the skills audit data reveals a substantial emphasis on the need for Soft Skills among employees, with 73% expressing a specific need for enhancing soft skills. This high percentage underscores the recognition of the importance of non-technical skills in the workplace.

Specifically, 45% of Senior Managers expressed a need for soft skills improvement, emphasizing ongoing demand for interpersonal skills at the top level. Furthermore, 48% of Middle Managers identified soft skills gaps, showcasing the importance of soft skills in managerial roles. 52% of Professionals indicated the need for improvement, highlighting the crucial role soft skills play in professional positions. Lastly, 55% Support Staff expressed the desire for enhanced soft skills, showcasing the organization-wide need for effective communication and collaboration.

Looked at from the lens of Employment Type, 50% of Permanent employees expressed the need for continuous soft skills development, underlining the ongoing demand for effective communication. On their part, 55% Temporary Contract staff indicated the soft skills gap, emphasizing the immediate need for effective communication and collaboration in temporary roles.

In terms of the Field of Specialization, 53% of ICT specialists signaled the need for improvement in soft skills, highlighting the importance of effective communication in technology-driven fields.

On their parts, 52% of Electrical Engineers also identify the skills gap in soft skills, emphasizing the need for soft skills in engineering disciplines as well, while 55% of Finance staff as well as 50% of staff in the Conservation Ecology domain expressed the need for improvement in their soft skills.

Specialized Skills Development Programs

Coaching and Mentorship Programs

Although the analysis should provide valuable insights into the effectiveness and reach of coaching and mentorship programs, enabling the organization to refine and optimize these initiatives for maximum impact across all levels of the workforce, results show that only 2 employee (12%) have ever benefitted from coaching and mentorship arrangements.

Informed was provided that the Department has received technical support from EU, where KE1 stayed with the DoE for 3 years. The Department also benefitted support from KE2&3. There are Interns also working with experienced Officials in DoE to enhance their skills and exposure.

Coaching and mentorship initiatives are a useful way to develop middle and senior managers and should be planned in a manner that is more inclusive and accessible to support staff as well to enhance the overall impact of these initiatives.

Coaching and mentoring of staff in the energy sector can bring several benefits. Some of these benefits include:

- ✓ Improved Performance: Coaching and mentoring can improve staff performance by identifying areas for improvement and providing guidance and feedback. This can lead to increased energy efficiency, improved safety practices, and higher quality work.
- ✓ Increased Job Satisfaction: Coaching and mentoring can help staff feel more valued and supported in their roles, which can boost job satisfaction and motivation. This can lead to higher productivity and staff retention rates.
- ✓ Career Development: Coaching and mentoring can provide staff with opportunities for career development and advancement. This can help address skills gaps and provide a clear career path, which can lead to increased job satisfaction and loyalty to the company.
- ✓ Knowledge Sharing: Coaching and mentoring can facilitate knowledge sharing between staff members, enabling those with more experience to

impart their knowledge to those who are less experienced. This can help develop a stronger team, with everyone working towards a shared goal.

- ✓ Organizational Learning: Coaching and mentoring can facilitate organizational learning by creating a culture of continuous improvement and development. This can help the organization adapt to changing circumstances, technologies, and regulations in the energy sector.

Overall, coaching and mentoring can have a positive impact on staff, teams, and organizations in the energy sector, ultimately leading to improved performance, job satisfaction, and organizational success.

Examples of best practices of Coaching and Mentorship *(Institutions and Countries):*

- ✓ International Energy Agency (IEA): IEA, an intergovernmental organization focused on energy policy, offers coaching and mentoring programs for professionals working in the energy sector. These programs cover various aspects of energy policy, innovation, and technology, aiming to enhance the expertise and capabilities of individuals in the sector. Through these coaching and mentoring initiatives, IEA facilitates knowledge sharing and promotes best practices in the energy industry.

- ✓ The Energy Institute: The Energy Institute, a professional membership body for the energy sector, provides coaching and mentoring services to its members. They cater to professionals at different stages of their careers, offering support and guidance in areas like energy management, sustainability, and policy development. This fosters knowledge sharing, collaboration, and career growth within the energy sector.

These institutions' coaching and mentoring programs have been successful in providing valuable guidance, professional development, and upskilling opportunities for individuals working in the energy sector. They help foster a culture of continuous learning and improvement, which is essential to tackle the challenges and opportunities faced by the industry.

- ❖ Denmark: Denmark has a strong coaching and mentoring program in the energy sector, particularly in renewable energy. The government partners with industry experts and research institutions to provide coaching and mentoring to entrepreneurs, startups, and companies in the renewable energy space. This support helps these entities navigate the complexities of the sector,

develop innovative solutions, and accelerate the growth of renewable energy in the country.

- Germany: Germany is known for its successful transition to renewable energy, largely due to its comprehensive coaching and mentoring programs. The government, along with industry associations and research institutions, offers coaching and mentoring support to individuals and organizations involved in the energy sector. This helps in fostering knowledge transfer, encouraging innovation, and building a skilled workforce for the renewable energy industry.
- Singapore: Singapore has implemented a coaching and mentoring program under its National Energy Transformation (NET) initiative. The government provides coaching and mentoring to entrepreneurs, startups, and companies working on clean energy technologies and solutions. This program supports the development and adoption of clean energy technologies in Singapore and helps the country establish itself as a leading player in the clean energy sector in the Asia-Pacific region.
- United Kingdom: The United Kingdom has a well-established coaching and mentoring ecosystem in the energy sector, facilitated by organizations like Energy Systems Catapult and Innovate UK. These organizations offer coaching and mentoring support to startups, SMEs, and researchers in the energy sector, focusing on areas such as clean energy, smart grids, and energy efficiency. The program helps in nurturing innovation, developing sustainable solutions, and fostering a vibrant energy sector in the UK.
- Australia: Australia emphasizes coaching and mentoring in the energy sector through initiatives like the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC). These entities provide coaching and mentoring support to companies and projects involved in renewable energy, helping them navigate regulatory frameworks, secure funding, and accelerate the deployment of renewable energy technologies. This support has been instrumental in Australia's transition to clean and sustainable energy sources.
- Rwanda: Used the Strategic and Capacity Building Initiative (SCBI) approach of coaching and mentoring by deploying experienced energy sector practitioners to coach and mentor national counterparts from the Rwanda Energy Group (REG); Energy Development Corporation Limited (EDCL) and Energy Utility Corporation Limited (EUCL).

These countries' coaching and mentoring programs in the energy sector have been instrumental in driving innovation, accelerating the adoption of renewable

energy technologies, and building a strong and capable workforce. They have demonstrated the importance of collaboration between governments, industry experts, and research institutions to support and guide individuals and organizations towards a sustainable energy future.

Long-Term Embedded Technical Advisor Support

Utilization of long-term embedded advisor (technical advisors) support, enables the organization to bridge capacity deficiency in the short to midterm. Analysis of responses from DoE however indicate that only 18% of the respondents ever benefited from this arrangement.

Recognizing the varying needs across positions is crucial for customizing long-term embedded advisor support programs to meet the specific needs and preferences of different employee groups.

Staff Exchange Placements

The analysis indicates that 56% of employees across diverse positions and backgrounds are interested in participating in staff exchange placements. This highlights a considerable portion of the workforce recognizing the potential benefits associated with exchange programs.

Specifically, Senior Managers show the highest interest in exchange placements, with 50% expressing a desire. This interest is consistent regardless of specific job titles within the senior management cadre.

Among permanent employees, 51% show interest, indicating a strong desire for international exposure in both permanent and temporary roles.

Within the middle management category, 48% express a desire for exchange placements. This interest is consistent across various job titles within the middle management cadre.

For permanent (appointee) employees, the interest is at 47%, while temporary contract employees show a slightly higher interest at 50%.

As for the professionals, while still interested, only 42% are interested. Interest is consistent across different job titles within the professional cadre.

In terms of type of employment, there's a minimal difference, with 41% of permanent (appointee) employees expressing interest and 44% of temporary contract employees showing interest.

Benchmarking Tours

The overall percentage of employees expressing interest in benchmarking tours is a noteworthy aspect of the skills audit exercise. The analysis reveals that 68% of employees across various positions and backgrounds are interested in participating in benchmarking tours. This signifies a majority of the workforce acknowledging the value and benefits associated with benchmarking activities.

Specifically, Senior Management staff exhibited the highest interest in benchmarking tours, with 52% expressing the desire. This interest is also consistent across various job titles within the senior management cadre.

Among permanent employees, 53% expressed interest, while just half (50%) of temporary contract employees show the need for benchmarking tours.

Within the middle management category, 48% express a desire for benchmarking tours. This interest is consistent across different job titles within the middle management cadre.

Similar to staff exchange placements, 44% of professionals showed in benchmarking tours. Interest is consistent across various job titles within the professional cadre.

In terms of employment type, there's a minimal difference with 43% of permanent employees expressing interest and 46% of temporary contract employees showing interest in benchmarking tours as well.

Other Insightful Findings

Personal Training Plans

Collected data indicates that 59% of employees do not have Personal Training Plans, and of those with it, only 35% have discussed them with their immediate supervisors.

Specifically, results show that 40% of Senior Managers and executives have personalized training plans, indicating a strategic focus on leadership development. This compares favorably with only 35% of Middle Managers with personalized training, aligned with the need for skill enhancement in their managerial roles. 42% of the Professionals and 38% of Support Staff also have individualized training plans, showcasing a commitment to refining specialized knowledge.

From the perspective of job tenure, 40% of Permanent staff have personalized training plans, compared to 33% of Temporary Contract staff. Furthermore, 45% of ICT staff, 42% of Electrical Engineers and 38% of Finance staff have personalized training plans, reflecting the dynamic nature of technology.

Identified Skills Deficit

By understanding distinctive skills deficits across various positions, DoE can tailor its training and capacity development programs to foster a more well-rounded and skilled workforce, contributing to individual growth and organizational effectiveness.

Results from the data indicate middle managers express a need for enhancement in managerial capabilities, indicating potential gaps in leadership, decision-making, and team management skills.

Professionals on the other hand highlight a demand for technical skill development. This suggests a need for targeted training programs to enhance their expertise in specific technical domains.

Senior managers and executives on their part emphasize a need for improved soft skills, pointing to areas such as communication, negotiation, and emotional intelligence. This aligns with their strategic roles requiring effective interpersonal skills.

For support staff members, they identified a technical skills deficit, indicating a requirement for training programs tailored to their specific technical responsibilities.

Crafting training initiatives that address the specific skills deficits identified for each position can optimize the impact of capacity development efforts. Recognizing that different positions require diverse skill sets is essential. A holistic approach to capacity building should encompass technical, managerial, and soft skills development.

Furthermore, addressing the identified skills deficits aligns with employees' aspirations, such as career progression for middle managers, technical expertise for professionals, and soft skills for senior managers.

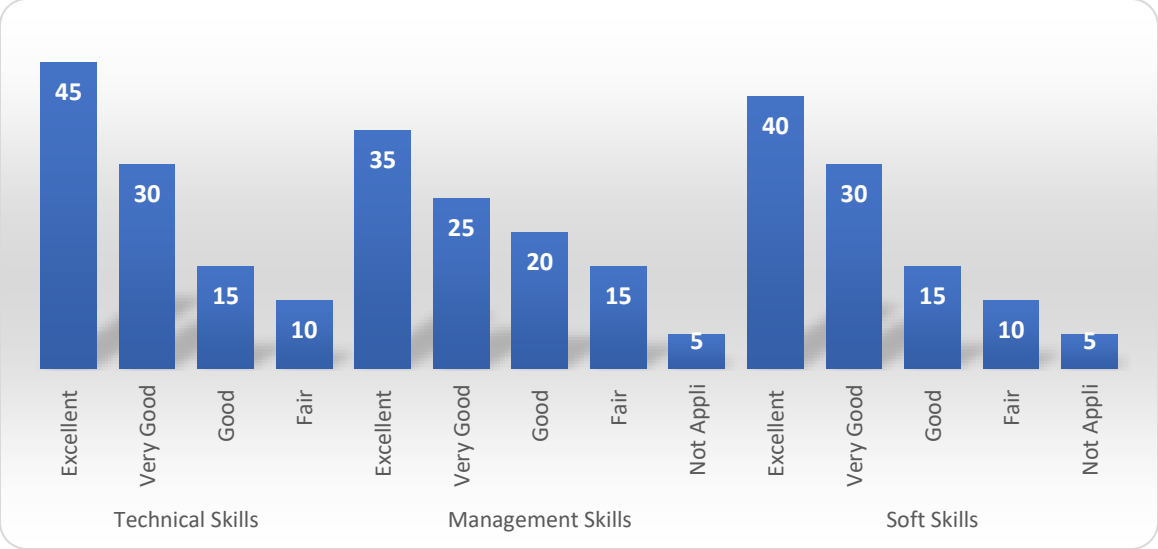
Employees' Personal Rating Across Different Skills Sets

This analysis offers a comprehensive overview of how employees in different categories rate themselves across technical, management, and soft skills, guiding targeted interventions for holistic skills development in DoE as summarize in the following figure.

Key Insights are that across all employee categories, 45% of "Excellent" ratings in technical skills suggests a modestly strong technical competency level in the institution. Soft skills on the other hand exhibit a balanced distribution with a significant portion falling under "Excellent" and "Very Good" ratings (40% and 30% respectively).

DoE can therefore, leverage these insights to strategically plan skills development initiatives, focusing on enhancing areas with lower ratings.

Figure 7 Employees' Personal Rating Across Different Skills Sets



Skills Improvement Requirements

Results from responses obtained indicate that middle managers recognize the importance of honing strategic decision-making, leadership, and conflict resolution skills to excel in their roles. Professionals on their part highlight a dual need for technical expertise and soft skills improvement, emphasizing a holistic approach to their skill development.

Senior managers and executives on their part prioritize enhancing soft skills and strategic leadership abilities, aligning with their pivotal roles in policy and strategy formulation, while Professionals and support staff recognize the significance of both technical and soft skills, indicating a need for a well-rounded skill set to contribute effectively in their roles.

This implies that crafting training modules that specifically target the identified skills for improvement can yield more impactful outcomes. besides that, encouraging employees to create personalized development plans based on their identified skills gaps can enhance engagement and ownership in the learning process.

Also, recognizing the overlapping needs for technical, soft, and professional skills underscores the importance of fostering collaboration and communication across different departments and roles.

Understanding the specific skills that employees aspire to improve provides a roadmap for designing tailored training interventions, contributing to a workforce that is better equipped to meet the challenges of their roles.

6. SKILLS DEVELOPMENT PLAN FOR DOE STAFF

Generally, skills development for departments of energy can play a crucial role in ensuring that staff are equipped with the necessary knowledge and expertise to effectively carry out their roles. Below are some key skills that can be beneficial to develop within these departments:

- Technical Expertise: Departments of energy often deal with complex and evolving technologies and systems. It is important for staff to have a strong technical foundation in areas such as renewable energy, energy efficiency, grid management, and energy storage. Continuous training and upskilling in these technical areas will contribute to the department's ability to effectively operate and support the energy sector.
- Regulatory Knowledge: Given the regulated nature of the energy sector, having a deep understanding of energy policies, regulations, and compliance requirements is essential. This includes knowledge of energy market structures, environmental regulations, safety standards, and legal frameworks. Developing and maintaining expertise in these areas can help departments of energy navigate the regulatory landscape and ensure compliance.
- Project Management: Many energy sector initiatives involve complex projects with multiple stakeholders, timelines, and deliverables. Strong project management skills, including planning, resource allocation, risk management, and communication, are necessary to successfully execute and oversee these projects. Investing in training and development in project management can help departments of energy effectively manage their initiatives and achieve desired outcomes.
- Data Analysis and Technology Skills: The energy sector is becoming increasingly data-driven, with advanced analytics and technology playing a significant role in areas such as grid optimization, demand forecasting, and energy modeling. Developing skills in data analysis, data visualization, and emerging technologies, such as artificial intelligence and machine learning, can enable departments of energy to harness the power of data and technology to make informed decisions and drive efficiency.
- Communication and Stakeholder Management: Effective communication and stakeholder management skills are critical for departments of energy to engage with various stakeholders, including government agencies, industry players, the public, and local communities. Developing skills in negotiation, persuasion, public speaking, and diplomacy can help these departments

build positive relationships, gain support for initiatives, and navigate potential conflicts.

By investing in the development of these skills, departments of energy can then enhance their capabilities, improve their performance, and contribute to the overall success of the energy sector.

The following Skills Development Plan therefore provides an overview of capacity development interventions, including benchmarking tours and technical advisor support, along with timelines and responsibilities for each staff category, ensuring a holistic and targeted approach to enhance organizational capabilities. The proposed skills development pathways is cognizant of the current DoE arrangement and also the envisaged Energy Commission Skills Requirements.

Skills planning is a critical issue given the mandate of DoE in the energy sector ecosystem and the ongoing institutional reforms. It is therefore important to include skills development planning in the annual work plan and budget for DoE and not 'tagged' at the end or as an ad hoc arrangement. At the discretion of the management of DoE or in the proposed Energy Commission, it is important to have a designated staff at a senior level to be accountable for closely coordinating and monitoring implementation of the skills development plan. This will include re-skilling and upskilling staff to be better equipped to navigate and be updated with current and new trends in the energy ecosystem. It is important to have an inclusive skills development arrangement with dis-aggregated data on gender.

While the Energy Sector is quite specialized, 'soft' skills need to be identified and accommodated across various job levels and job families. It is also worthwhile acknowledging that the energy sector is a multidisciplinary field; this calls for a complex knowledge and skills base which must realize the importance of management, communication, leadership, environmental and other skills. For example, there is a great demand for skills, from engineering and environmental skills to energy economics.

Desktop research, interviews and findings from the Questionnaire have revealed that the most cited 'soft skills' include project management; leadership; communication; agility; emotional intelligence; mentoring; community outreach; critical thinking; decision making and problem solving.

It is also imperative to be cognizant of streams of work and connected jobs required at certain points and activities along the time horizon e.g., construction, policy development and automation.

Each member of staff will be expected to refer to this overall skills development plan to annually prepare their own individual training plan that will be submitted to DoE senior management for review, approval, and support.

DoE Management has to ensure that skills development remains focused and strategic as well as phased – everything becoming a priority is not feasible. Spreading too thin everywhere does not produce desired results, E.g. the SCBI approach in Rwanda has revealed early successes.

Table 2: Skills Development Plan

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention	Timeline
Director, DoE and PEO (Planning; RE and CE) – *will be direct counterparts to the Embedded Advisor*	Energy Policy and Strategy design and oversight and coping up with complex and evolving technologies and systems	Hire long term (at least 2 years) embedded Advisors *(experts in policy)* on Energy Policy and Strategy design and oversight to provide coaching and mentoring to the designated managers.	Mid-term
Middle level Managers and Technical Staff (Engineers) – *will be direct counterparts to the Embedded Advisor.* N.B: Management to select high potential staff in a transparent manner who shall be mentored and coached.	Prioritization and effective delivery of Energy projects and programs	Hire long term (at least 2 years) embedded Advisors *(subject matter experienced practitioners/experts)* to provide dual technical assistance in form of coaching and mentoring as well as direct delivery of identified priorities in line with renewable energy, conventional energy, and energy planning.	Mid-term
All Managers at senior level at DoE	Executive Training on Energy Leadership to include but not limited to strategic planning; decision making; problem solving; time management; stress management; team building; corporate governance; strategic change leadership; understanding of the energy ecosystem and modern trends; electricity markets and petroleum pipelines; energy supply and demand;	Procure a reputable firm to conduct a recognized Executive Training on Energy Leadership	Short-term

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention	Timeline
	diversity and gender mainstreaming in energy.		
All Staff	New technological applications and processes	Retraining/Upskilling the DoE staff in new technological applications and processes through in-house training and related interventions	Mid-term
All Senior and Middle level Managers	Practical and hands-on Exposure to best practices	Conduct benchmarking tours to reputable institutions with similar mandate	Mid-term
		Sign MoUs with these institutions in line with skills and knowledge sharing.	Mid-term
		Send staff from DoE to these institutions for a period of at least a month to understudy their counterparts in these institutions and gain practical exposure to good practices	Long-term
Technical Staff	Targeted specialized training in line with core mandate of DoE and the proposed Energy Commission.	In line with enhancing/maintaining professional standards under a continuous professional development program, DoE should support its staff to undertake targeted short/ long term specialized training at reputable Centres of excellence in relevant technical areas under renewable energy; conventional energy and energy planning in the following, but not limited to skill areas:	Short-term

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention		Timeline
		- *Petroleum Products Management and Oversight* - *Clean Energy* - *Large Power Generation* - *Energy Policy Design and Oversight* - *Energy Compliance – licensing and inspection* - *Energy Pricing and Levies* - *Renewable Energies (solar, wind and biogas)* - *Energy Construction and Installation* - *Energy Economics* - *Energy Statistics* - *Conservation Ecology* - *Environment and Social Safeguards*	- *Energy Transmission and Distribution* - *Operations and Maintenance* - *Energy Management systems (energy efficiency, home energy efficiency auditing, commercial building energy auditing)* - *Energy Transition* - *SMART Energy* - *Oil & Gas Modern Management*	

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention		Timeline
		- *Energy Investment planning and financial analysis* - *Inventory management (Stock control and disposal of assets)*	- *Use of ICT applications, technologies, and tools, - Energy Software Development and Management* - *Energy Mini-Grid Management* - *Energy projects design and management* - *Public Private Partnership (PPP) management* - *HR management (including orientation and placement,*	

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention	Timeline
		career management)	
All Staff	Staff individual training needs assessments	Conduct annual staff training needs assessments (TNA). This can be done during the annual performance evaluation. TNA aims at the following situations: solving a current problem; avoiding a past or current problem; creating or taking advantage of a future opportunity and providing learning, development, or growth. Successful training needs analysis will identify staff and what kind of training is needed. It is counter-productive to offer training to staff who do not need it or to offer the wrong kind of training. A Training Needs Analysis helps to put the training resources to good use.	Annual
	Upgrading of academic qualifications in relevant technical areas under renewable energy, conventional energy, and energy planning	- Based on an agreed staff individual training plans and respective justification, support upgrading of academic qualifications in relevant technical areas under renewable energy, conventional energy, and energy planning.	

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention	Timeline
		- To manage costs and ensure this training arrangement provides for more DoE Staff, institutionalize cooperation with the National University of Lesotho to update/ develop curricula to respond to the needs of DoE for staff to enroll in advanced or post graduate programs.	
All Staff	Fit-for-purpose career path for DoE staff aligned to skills development	The capacity of DoE to attract, retain and adequately motivate its personnel, and build adequate Human Resource capabilities, is a prerequisite to facilitate its transformation in a more effective and efficient Institution, capable to address the needs of the citizenry. In this regard, develop a fit-for-purpose career path for DoE staff aligned to skills development of staff – horizontal and vertical needs to be developed in order to facilitate a career path and provide DoE with a career structure which will attract and retain suitable and qualified personnel through effective human resource planning, recruitment, placement, orientation, compensation and promotion policies.	

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention	Timeline
		A career progression structure includes the grading structure, the career progression structure for job families, and career mobility describing entry into DoE, advancement within the career and exit. The current grading structure at DoE does not allow growth and does not provide for career progression, that's why in a new grading structure in the proposed Energy Commission, there is a need to accommodate all the levels and provide for specialization and also career progression. Also, provide for training, coaching and mentoring and this new grading structure provides for succession management.	
DoE Management	Updated Job Descriptions	To come with new functional structure that responds to the need of more specialized and qualified technical skills, DoE to update Job Descriptions (required qualifications, experience, and soft skills) to match with the expected profiles for the newly established Commission. This will include job workload analysis and setting training alternatives.	Mid-term
	Updated performance contract and evaluation	Update the performance contract evaluation to align with (i) updated Job Descriptions with key performance	Mid-term

Targeted Staff	Identified Skill/Organizational Capacity Gap	Skills Development Intervention	Timeline
		indicators and (ii) incentives for training to establish a high-performance culture at DoE. There is need for capacity building of DoE staff having leadership and supervisory roles to improve on performance evaluation.	
Hard to fill positions *(closing the scarce and critical skills gap)*	Vacancies that are hard to fill	DoE to consider adopting a Graduate Trainee Programme. Tap on highflyers from the University of Lesotho or the Association of Engineers to take up the hard to fill positions under the tutelage of senior managers. This will be considered as a young professional development programme and based on merit they can be absorbed in the DoE structure.	Long-term
		If the public service law permits or if waivers can be provided, DoE to outsource services from experienced local experts to take on these positions on contractual basis (renewable) to ensure that the mandate of DoE is achieved. One of the deliverables of these experts will skills and knowledge transfer to the permanent staff.	Long-term

7. MONITORING AND EVALUATION FRAMEWORK

The following framework provides a structured approach to monitoring and evaluating the effectiveness of the Skills Development Plan implementation, including measurable KPIs, specific objectives, data sources, data collection methods, timelines, and responsibilities.

Objective	Key Performance Indicators (KPIs)	Data Source	Baseline	Data Collection Method	Timeline	Responsibility
Monitor completion of capacity development interventions	Completion rate of assigned training programs	Training records	TBD	Periodic reports from the HR and Training Departments	Short-Term (0-6 months)	HR Department
Measure skills enhancement among staff	Percentage increase in skills proficiency based on assessments	Pre and post-assessment results	TBD	Assessment tools (before and after training)	Short-Term to Medium-Term (0-12 months)	Training Team
Assess the application of learning in the workplace	Percentage of staff applying newly acquired skills	Supervisors' reports	TBD	Feedback from supervisors and self-assessment	Medium-Term (6-12 months)	Department Heads
Gauge employee satisfaction with the programs	Percentage of positive responses in employee satisfaction surveys	Employee satisfaction surveys	TBD	Anonymous employee surveys and feedback forms	Medium-Term (6-12 months)	HR Department
Track participation in benchmarking tours	Percentage of staff participating in benchmarking tours	Tour attendance records	TBD	Records of staff attendance in benchmarking tours	Short-Term to Medium-Term (0-12 months)	Training Team
Evaluate the impact on key performance indicators (KPIs)	Correlation between capacity development and relevant KPIs	KPI reports	TBD	Analysis of KPI reports and performance indicators	Long-Term (12+ months)	External Consultant
Gather feedback from technical advisors	Positive feedback on the application of skills and knowledge by staff	Technical advisors' reports	TBD	Regular reports from technical advisors	Long-Term (12+ months)	External Consultant

8. CONCLUSION AND RECOMMENDATIONS

CONCLUSION

From this skills audit and capacity building plan, it is evident that addressing the identified skills gaps through targeted training, mentorship, and ongoing support can contribute significantly to the overall capacity development and success of the organization. Based on that therefore, the following conclusions can be reached for management attention:

Skills Gap Identification

The skills audit acknowledges skills assets in DoE, but also revealed significant gaps in technical, management, and soft skills among employees across all levels, indicating a need for targeted capacity development initiatives.

Employee Interest in Growth and Development

The survey highlighted a keen interest among employees in various training programs, exchange placements, and benchmarking tours, signaling a positive attitude towards professional growth and development.

Need for Diverse Training Methods

Employees expressed a preference for diverse training methods, including workshops, online courses, and mentorship programs. This suggests a need for a flexible and adaptive approach to capacity building initiatives.

Importance of In-House Mentorship

The desire for coaching and mentorship programs indicates a recognition of the value of internal knowledge transfer. Establishing a structured in-house mentorship program could address this need.

Promoting Long-Term Technical Support

The acknowledgment of skills-related changes underscores the importance of providing ongoing technical support to ensure continuous improvement and adaptation to evolving job requirements.

Job Description Alignment

The skills mismatch reported by some employees highlights the necessity of revising and aligning job descriptions with the skills required, ensuring clarity in roles and responsibilities.

Commitment to Professional Growth

The overall positive response to training initiatives, combined with the expressed interest in career progression and salary increase, reflects a commitment among employees to personal and professional growth.

RECOMMENDATIONS

To address specific skills gaps in the DoE, practical skills development is essential. Here are some practical approaches to consider:

- Training Programs: Implement comprehensive training programs that focus on developing practical skills relevant to the energy sector. These programs should cover a wide range of topics, including energy policy and regulation, project management, energy efficiency, renewable energy technologies, and data analysis. By providing targeted training, employees can enhance their skills and knowledge in areas where gaps exist.
- Cross-Departmental Training: Offer cross-departmental training programs to develop a versatile workforce capable of handling diverse responsibilities. For example, employees from technical backgrounds can receive training in policy development, while policy analysts can receive training in technical aspects. This cross-training ensures a well-rounded workforce that can address a wide range of energy-related challenges.
- Job Shadowing: Encourage job shadowing programs to expose employees to different roles and departments within DoE. This practical experience helps develop a broader skill set and a better understanding of the organization as a whole. Employees can learn from their peers and gain hands-on experience in various areas, bridging any existing skills gaps.
- Collaboration with Experts and Industry: Collaborate with industry experts, energy companies, and research organizations to offer specialized training programs. These partnerships can provide access to expert knowledge, cutting-edge technologies, and real-world case studies. Employees can benefit from the expertise and practical experiences shared by industry professionals, thereby addressing skills gaps more effectively.
- On-the-Job Training: Provide on-the-job training opportunities where employees can work alongside experienced professionals. Job coaches and

mentors can guide employees, help them acquire practical skills, and provide feedback on their performance. This hands-on approach allows employees to learn by doing and bridges the gap between theoretical knowledge and practical application.

- Employee Development Plans: Develop individualized employee development plans that identify skills gaps and set targeted goals for skills enhancement. Regular performance evaluations can help identify specific areas for improvement. These development plans should include practical training opportunities, formal education, and on-the-job learning experiences.

By implementing these practical skills development measures, the Department of Energy (DoE) can bridge skills gaps, enhance employee capabilities, and ensure a skilled workforce equipped to address the evolving challenges in the energy sector.

Furthermore, given that at the time of this assignment, it was intimated that the Department of Energy is transiting to an Energy Commission the following is recommended for consideration especially that the Mandate is being enhanced and the team has to be up-skilled as well as re-skilled:

- Technical and Engineering Skills: DoE staff should continuously develop their technical and engineering skills related to various energy technologies, such as renewable energy, energy efficiency, and grid systems. This will enable them to stay updated with the latest developments and understand the technical aspects of different energy projects.
- Policy and Regulatory Knowledge: As the energy sector is highly regulated, it is essential for DoE staff to be well-versed in energy policy and regulations. They should continuously update their knowledge about energy policies, regulatory frameworks, and guidelines to ensure effective implementation and enforcement.
- Data Analysis and Planning: Data plays a crucial role in energy planning and decision-making. DoE staff should develop skills in data analysis, interpretation, and visualization to effectively analyze energy consumption patterns, identify trends, and make informed decisions. They should also enhance their skills in energy modeling and forecasting to develop accurate energy plans and policies.
- Project Management: DoE staff often oversee various energy projects, including power plant installations, infrastructure development, and energy efficiency initiatives. Developing project management skills will enable them

to effectively plan, execute, and evaluate these projects, ensuring they are completed on time and within budget.

- Communication and Collaboration: Effective communication and collaboration skills are essential for energy commission staff to engage and collaborate with different stakeholders, including government agencies, energy companies, communities, and the public. These skills will enable effective knowledge sharing, consensus-building, and public awareness campaigns.
- Continuous Learning and Research: The energy sector is rapidly evolving, with new technologies, policies, and market trends emerging regularly. DoE staff should prioritize continuous learning and research to stay updated with industry advancements. Attending conferences, workshops, and training programs can provide valuable learning opportunities.
- Environmental and Sustainability Knowledge: DoE staff should develop a deep understanding of environmental impacts and sustainability aspects of different energy technologies. This will enable them to assess the environmental risks and benefits of energy projects and promote sustainable practices.
- Stakeholder Engagement and Public Outreach: DoE staff should develop skills in stakeholder engagement and public outreach to effectively engage with different stakeholders, including local communities and environmental organizations. This will help them to gather diverse perspectives, address concerns, and ensure transparency in decision-making processes.
- Financial and Economic Analysis: DoE staff should enhance their financial and economic analysis skills to evaluate the financial viability of different energy projects, calculate return on investment, and develop business cases for funding and investment decisions.
- Cross-functional Collaboration: DoE staff should foster cross-functional collaboration within the Department and with external stakeholders to leverage diverse expertise and knowledge. This will foster innovation, efficiency, and interdisciplinary approaches to addressing energy challenges.

From the preceding analysis of the skills audit data and inputs from other key experts, the following recommendations are made, which DoE can adopt to foster a culture of continuous learning, address current skills gaps, and prepare employees for future challenges in the dynamic energy sector as discussed below.

The following recommendations also provide further details on how they can be undertaken in line with what is highlighted in Table 3: Skills Development Plan

Tailored Training Programs

Develop customized modules focusing on technical, management, and soft skills based on the findings from the skills audit. Ensure these programs are tailored to meet the specific needs of different employee categories. This will involve a detailed analysis of the skills deficits identified, followed by the creation of practical, hands-on training content that directly addresses these gaps. Regular assessments and feedback mechanisms should be integrated to track progress and refine the training programs for ongoing effectiveness.

Diversify Training Methods

Introduce a comprehensive approach that includes interactive workshops, engaging online courses, and structured mentorship programs. This ensures that employees with varied learning preferences are accommodated, promoting a more inclusive and impactful learning experience. The implementation plan should outline the specific content and formats for each method, taking into consideration the skills gaps identified in the audit. Regular feedback mechanisms should be established to assess the effectiveness of each method, allowing for continuous improvement and adaptation to evolving learning needs.

Establish In-House Mentorship

Design a structured curriculum outlining specific skills and knowledge areas for mentorship, aligning with the identified skills gaps from the skills audit. Develop comprehensive training sessions for mentors to equip them with effective guidance and communication skills.

Also Implement regular check-ins and progress assessments to monitor the mentorship journey. Create a centralized platform for mentors and mentees to access additional resources and share insights. Encourage an open feedback loop to continuously refine the program based on evolving skill needs.

This actionable approach ensures the in-house mentorship program becomes a dynamic tool for addressing skill-related changes, fostering professional growth, and contributing to a culture of continuous learning within the organization.

Job Description Alignment

Conduct a comprehensive skills assessment to identify the precise skills, qualifications, and competencies necessary for each role. Utilize this data to update job descriptions, ensuring they accurately reflect the skill sets required.

Introduce a standardized template for job descriptions that clearly outlines key responsibilities and expected skill proficiencies. Implement regular audits to ensure ongoing alignment with evolving job requirements. Encourage collaboration between managers and employees in this process to incorporate valuable on-the-job insights.

This approach establishes a transparent framework, reducing skills mismatches and enhancing employee performance. Regular updates and collaborative input create a dynamic system that adapts to changing organizational needs, fostering a workforce aligned with the skills essential for success.

Long-Term Technical Support

To implement effective long-term technical support, establish a dedicated Learning and Development (L&D) program tailored to address evolving skill requirements. Design a curriculum that includes regular, targeted training sessions conducted by industry experts.

Create an accessible repository of up-to-date resources, including online materials, articles, and best practice guides, ensuring employees have continuous access to relevant information.

Initiate a feedback loop to gauge the effectiveness of the support mechanisms, allowing for continuous improvement. Develop a communication mechanism to keep employees informed about available resources and upcoming training opportunities.

This ensures that employees receive continuous support, empowering them to navigate dynamic skill landscapes effectively.

Promote Exchange Placements

Establish a comprehensive Exchange Placement Program designed to foster cross-cultural learning and skill enrichment for employees in technical roles. Develop clear guidelines and eligibility criteria for participation, ensuring a fair and transparent selection process.

Collaborate with regional and international partner institutions to create mutually beneficial exchange opportunities. Facilitate pre-departure orientation programs to prepare participants for cultural differences and work dynamics in the host country. Implement a structured feedback mechanism to capture insights and learning outcomes from both participants and host organizations.

Promote the program through various channels, emphasizing the career-enhancing benefits and the organization's commitment to professional development. Regularly assess the program's impact on participants' skill enhancement and its alignment with organizational goals.

Staff exchange placements can bring several benefits to DoE, including:

1. Knowledge sharing and capacity building: Staff exchanges provide an opportunity for employees to learn from and collaborate with professionals from other organizations or countries. This exchange of knowledge and expertise helps build the capacity of DoE staff, enhancing their skills and capabilities.

2. Exposure to best practices: By participating in staff exchange placements, employees can gain exposure to best practices in the energy sector. They can learn about innovative approaches, technologies, and strategies that have been successful in other organizations or countries. This knowledge can be applied to improve the DoE 's operations and decision-making processes.

3. Networking and collaboration: Staff exchange placements allow employees to establish relationships and network with professionals from different organizations or countries. This opens up avenues for collaboration and future partnerships, enabling the DoE to access a broader range of expertise and resources.

4. Enhanced understanding of international energy policies and regulations: Staff exchanges provide an opportunity for employees to learn about energy policies and regulations in other countries. This understanding is valuable for the DoE as it can help refine its own policies and regulations, ensuring they align with international best practices and standards.

5. Improved cross-cultural understanding: Staff exchanges promote cultural exchange and foster a deeper understanding of different perspectives, working styles, and approaches. This can enhance the DoE 's ability to work collaboratively with international partners, stakeholders, and investors.

6. Motivation and morale boost: Staff exchange programs, by offering employees the opportunity to learn and grow professionally, can boost their motivation and morale. It shows that the organization values their development and invests in their professional growth, leading to increased job satisfaction and loyalty.

7. Potential for innovation and creativity: Exposing employees to different working environments and approaches can spark innovation and creativity. They may bring back new ideas and insights that can contribute to the DoE's problem-solving, strategic planning, and decision-making processes.

In summary, staff exchange placements offer numerous benefits to the DoE, including knowledge sharing, capacity building, exposure to best practices, networking opportunities, international policy understanding, improved cross-cultural understanding, motivation boost, and potential for innovation and creativity.

Benchmarking Tours

Establish a targeted and results-driven Benchmarking Tours Program to expose employees to cutting-edge practices and innovative methodologies in their respective job roles. Develop a structured timetable that aligns with the specific needs of different departments and positions.

Identify top-performing institutions, both regionally and internationally, that are relevant to the energy industry and your objectives. Collaborate with them institutions to facilitate comprehensive knowledge-sharing sessions and site visits.

Implement a pre-tour orientation to ensure participants are well-prepared and focused on extracting maximum value from the experience. Create a post-tour evaluation mechanism to capture key learnings and potential areas for implementation within the organization.

Promote the Benchmarking Tours Program through internal communication channels, highlighting its contribution to professional growth, process optimization, and organizational excellence. Regularly assess the program's impact on participants' skill enhancement and its alignment with strategic objectives.

Regular Skills Assessment

Implement a robust and ongoing Skills Assessment Program designed to continually evaluate and adapt to evolving job requirements. Develop customized assessment tools tailored to the specific needs and roles within the DOE, ensuring a clear understanding of skills proficiency.

Integrate feedback mechanisms into the assessment process, allowing employees to provide insights on their own skill development needs and

preferences. Use this input to fine-tune the assessment tools and ensure they align with the organization's strategic objectives.

Link the Skills Assessment Program with targeted training initiatives, creating a seamless feedback loop that drives continuous improvement.

Career Progression Pathways

Develop a comprehensive Career Progression Framework outlining clear pathways for professional advancement within DOE. Align each pathway with specific training and skill development milestones, ensuring a transparent and achievable roadmap for employees.

Conduct a thorough skills gap analysis to identify the essential competencies at each career stage. Tailor training programs to address these gaps and empower employees to navigate their chosen progression pathway successfully.

Regularly communicate and reinforce the existence of these pathways to employees, emphasizing the direct correlation between skill development, training milestones, and career advancement. Encourage managers to actively support and facilitate employees' progression journeys.

Skills Development Investments over the long term

Initiate a strategic and phased approach to long-term skills development investments by establishing clear baselines, targets, and addressing identified gaps within the DOE.

Begin by conducting a comprehensive skills assessment to ascertain the current competency levels of employees and identify specific areas where skill development is needed. Utilize this data to set measurable baselines for different skill categories.

Define concrete and realistic targets for skill enhancement, aligning them with the organization's overall goals and objectives. Ensure that these targets are quantifiable, time-bound, and reflect the desired proficiency levels in identified skill areas.

Based on the assessment outcomes and established targets, design and implement targeted training programs and initiatives. These should be tailored to address the identified gaps and progressively elevate the skills of the workforce.

Regularly monitor and evaluate the progress of skills development initiatives against set targets. Adjust investment strategies based on the evolving needs of the organization, emerging trends, and feedback from ongoing assessments.

Monitoring and Evaluation

Implement a robust Monitoring and Evaluation Framework to formally institutionalize skills development in DoE and track the effectiveness as well as sustainability of skills development initiatives. Regularly assess KPIs and adjust strategies based on feedback and outcomes. Regular review of the M&E framework presented in this report can help to keep it relevant for DoE skills development needs.

9. ANNEX

9.1. ADDITIONAL INFORMATION ON THE COACHING AND MENTORING APPROACH

OBJECTIVES OF THE COACHING APPROACH

• Provide staff of DoE the necessary abilities to cope with new demands from the fast-changing energy sector environment, whilst creating an environment where they are free to practice and demonstrate their newly learnt abilities.

• Assist groups of staff of DoE to strengthen their competencies to deliver on targets / deliverables embedded in their performance contracts.

• Work with counter parts in DoE and define targets set and key areas of transfer of knowledge & skills.

• Expert coaching will be integrated in DoE performance management through alignment with job profiles of the counterparts, performance appraisals and capacity needs defined in DoE.

• Support DoE to ensure that gender is mainstreamed in targets / deliverables and that knowledge and skills are transferred in a gender sensitive manner.

• Expert coaching is both career and value orientated. It is career orientated because it introduces counterparts to ways of thinking, solving problems, strategizing and developing skills that are relevant to their careers; it is value orientated in that it develops the counterparts' character and values, reflected in (professional) attitude and behaviour.

• Expert coaching is tailored to specific expert inputs and hands on support, learning by doing, accompaniment and on the-job training, peer learning and feedback, assuring that application of new knowledge and skills takes place in the actual work setting.

The specific objectives of the expert coaches will be:

• Delivering organizational targets: the expert coaches will be responsible for assisting DoE staff to achieve specific organizational targets / deliverables agreed in the inception report and followed up in the annual and monthly activity plans.

• Transfer of skills and knowledge: the expert coaches will be responsible for transfer of knowledge and skills to ensure that targets / deliverables are achieved, required competencies indicated in the job profiles are strengthened and quality of performed tasks is guaranteed. This includes increased confidence to carry out tasks independently.

• Contributing to the further development and improvement of the expert coaching approach in DoE through regular reviews and feedback.