



**THE UNITED REPUBLIC OF TANZANIA
NATIONAL AUDIT OFFICE**



ISO 9001:2015 Certified

**PERFORMANCE AUDIT REPORT ON THE
MANAGEMENT OF THE IMPORTATION
OF PETROLEUM IN THE COUNTRY**



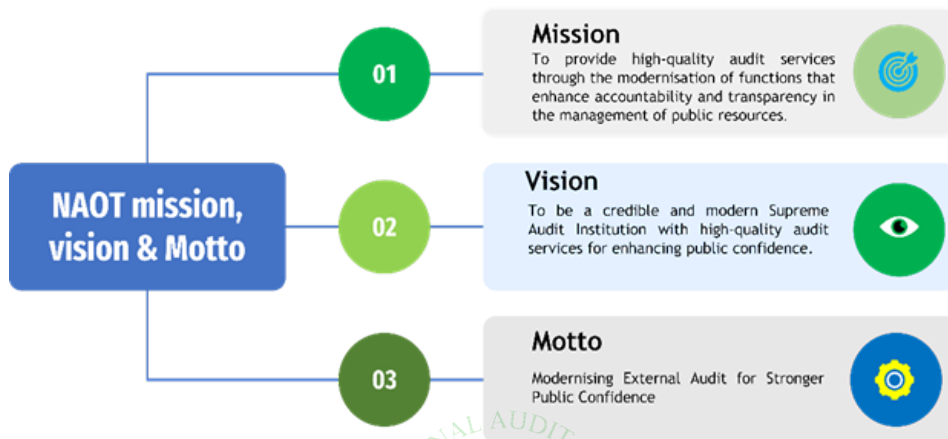
**CONTROLLER AND AUDITOR GENERAL
MARCH, 2024**



About the National Audit Office

Mandate

The statutory mandate and responsibilities of the Controller and Auditor-General are provided for under Article 143 of the Constitution of the United Republic of Tanzania of 1977, and in Section 10 (1) of the Public Audit Act, Cap 418.



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PREFACE



Section 28 of the Public Audit Act, CAP 418 gives mandate to the Controller and Auditor General to carry out Performance Audit (Value-for-Money Audit) to establish the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Public Authorities and Other Bodies which involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

I have the honour to submit to Her Excellency, the President of the United Republic of Tanzania, Hon. Dr. Samia Suluhu Hassan, and through her to the Parliament of the United Republic of Tanzania, the Performance Audit Report on the Management of Imported Petroleum in the country.

The report contains findings, conclusions, and recommendations that are directed to the Ministry of Energy and their implementing agencies, namely Tanzania Petroleum Development Company (TPDC), Petroleum Bulk Procurement Agency (PBPA) and Energy and Water Utilities Regulatory Authority (EWURA).

Ministry of Energy and its implementing agencies had the opportunity to scrutinize the factual contents of the report and comment on it. I wish to acknowledge that discussions with the Ministry of Energy and their implementing agencies have been useful and constructive.

My Office will conduct a follow-up audit at an appropriate time regarding actions taken by the Ministry of Energy and their implementing agencies in implementing the recommendations in this report.

I would like to thank my staff for their commitment to preparing this report. I also acknowledge the audited entities for their cooperation with my Office, which facilitated the timely completion of the audit.



Charles E. Kichere
Controller and Auditor General
United Republic of Tanzania
March, 2024



TABLE OF CONTENTS

LIST OF TABLES	vi
LIST OF FIGURES.....	vii
LIST OF ABBREVIATIONS AND ACRONYMS.....	viii
DEFINITION OF TERMS	x
EXECUTIVE SUMMARY	xi
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 BACKGROUND OF THE AUDIT	1
1.2 THE MOTIVATION FOR THE AUDIT	1
1.3 AUDIT DESIGN	3
1.4 SAMPLING, DATA COLLECTION AND ANALYSIS METHODS	9
1.5 DATA VALIDATION PROCESS	13
1.6 STANDARDS USED FOR THE AUDIT	13
1.7 STRUCTURE OF THE AUDIT REPORT	14
CHAPTER TWO	15
SYSTEM FOR MANAGING THE IMPORTATION OF PETROLEUM PRODUCTS IN THE COUNTRY.....	15
2.1 INTRODUCTION	15
2.2 LEGAL FRAMEWORK GOVERNING IMPORTATION OF PETROLEUM PRODUCTS.....	15
2.3 GOALS, OBJECTIVES AND STRATEGIES.....	18
2.4 ROLES AND RESPONSIBILITIES OF KEY ACTORS AND STAKEHOLDERS	18
2.5 RESOURCES FOR THE MANAGING THE IMPORTATION OF THE PETROLEUM PRODUCTS	25
2.6 PROCESS DESCRIPTION FOR THE IMPORTATION OF THE PETROLEUM IN THE COUNTRY	29
2.7 PROCESS DESCRIPTION OF COORDINATION AND PERFORMANCE MEASUREMENT FOR THE MANAGEMENT OF IMPORTATION OF PETROLEUM PRODUCTS.....	31
CHAPTER THREE	33
EXTENT OF MANAGEMENT OF IMPORTATION OF PETROLEUM PRODUCTS IN THE COUNTRY.....	33
3.1 INTRODUCTION	33
3.2 THE EXTENT OF MAINTAINING MINIMUM PETROLEUM STOCK IN THE COUNTRY	33
3.3 THE EXTENT OF AVAILABILITY OF PETROLEUM INFRASTRUCTURES IN THE COUNTRY	36
CHAPTER FOUR	38
FINDINGS ON THE FORECASTING, ORDERING AND RECEIVING OF THE PETROLEUM PRODUCTS	38
4.1 INTRODUCTION	38
4.2 FORECASTING OF PETROLEUM DEMAND	38
4.3 MANAGEMENT OF ORDERING AND RECEIVING OF PETROLEUM PRODUCTS IN THE COUNTRY ...	39
CHAPTER FIVE.....	54
FINDINGS OF STOCK MONITORING AND REGULATING PETROLEUM INDUSTRY IN THE COUNTRY.....	54
5.1 INTRODUCTION	54

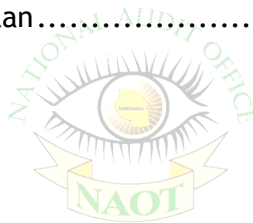
5.2	STOCK MONITORING OF THE PETROLEUM PRODUCTS IN THE COUNTRY AS PERFORMED BY EWURA.....	54
5.3	INEFFECTIVE PERFORMANCE OF THE NATIONAL PETROLEUM AND GAS INFORMATION SYSTEM (NPGIS).....	59
5.4	EWURA INADEQUATELY ENFORCED PROTECTION OF THE PETROLEUM INFRASTRUCTURES AGAINST POTENTIAL LEAKS.....	62
5.5	OVERSEE THE IMPLEMENTATION OF THE PETROLEUM BULK PROCUREMENT SYSTEM	66
CHAPTER SIX.....		69
FINDINGS OF THE PETROLEUM STRATEGIC RESERVE, RECEIVING AND STORAGE INFRASTRUCTURE		69
6.1	INTRODUCTION	69
6.2	STRATEGIC PETROLEUM RESERVE, RECEIVING AND STORAGE INFRASTRUCTURES.....	69
CHAPTER SEVEN		78
FINDINGS ON COORDINATION AND EFFICIENCY OF THE PERFORMANCE MEASUREMENT FOR EWURA, TPDC AND PBPA BY MINISTRY OF ENERGY		78
7.1	INTRODUCTION	78
7.2	COORDINATION FOR MANAGEMENT OF THE IMPORTATION OF PETROLEUM IN THE COUNTRY..	78
7.3	PERFORMANCE MEASUREMENT FOR AGENCIES RESPONSIBLE FOR ENSURING THE SECURITY OF THE SUPPLY OF PETROLEUM	81
CHAPTER EIGHT		87
AUDIT CONCLUSION		87
8.1	INTRODUCTION	87
8.2	GENERAL AUDIT CONCLUSION	87
AUDIT RECOMMENDATIONS		91
9.1	INTRODUCTION	91
9.2	RECOMMENDATIONS TO THE MINISTRY OF ENERGY	91
9.3	RECOMMENDATIONS TO THE ENERGY AND WATER UTILITIES REGULATORY AUTHORITY (EWURA)	92
9.4	RECOMMENDATIONS TO THE TANZANIA PETROLEUM DEVELOPMENT CORPORATION	92
9.5	RECOMMENDATIONS TO THE PETROLEUM BULK PROCUREMENT AGENCY.....	93

LIST OF TABLES

Table 1.1:	Selection of Regions Covered by the Audit.....	11
Table 2.1:	Allocated Fund for the Managing the Importation of the Petroleum at MoE - Division of Petroleum and Gas	26
Table 2.2:	Budgeted and Expenditures for activities of the Petroleum Division at EWURA.....	26
Table 2.3:	Allocated Fund for Importation of the Petroleum at PBPA ..	27
Table 2.4:	Status of Human Resources for Management for Importation of Petroleum at MoE	28
Table 2.5:	Human Resource Requirements for the Management of the Importation of Petroleum at EWURA	28
Table 4.1:	Status of OMCs Reported having Fuel in Financial Holds.....	42
Table 4.2:	Percentage of Vessels Delayed to Discharge	45
Table 4.3:	Status of Vessels Delayed	45
Table 4.4:	Extent of delays	45
Table 4.5:	Charges Incurred for Delay in Starting to Discharge Fuel	48
Table 4.6:	Status of Vessels Discharged within a Particular Month.....	48
Table 4.7:	Indicates the Arrival status of Vessels	49
Table 4.8:	Extent of Vessels Delayed.....	50
Table 4.9:	Status of Unpaid Demurrage cost due as of 22 September 2023	51
Table 4.10:	Abnormal loss recorded and key observation during the investigation	52
Table 5.1:	Status of OMCs Maintaining Physical Operational Stocks of Petrol Products of less than 15 Days	55
Table 5.2:	Status of OMCs who Maintained Physical Operational Stocks of Diesel Products for Less than 15 Days.....	56
Table 5.3:	Status of OMCs Logged in Petroleum Products Stock Levels in NPGIS.....	60
Table 5.4:	Status of the Technical Review meeting to assess the performance of the BPS	67
Table 6. 1:	List TPDC's Plots for Establishment of Petrol Depots and Stations and their Ownership Status.....	70
Table 6.2:	Capacity of Facilities at the Port's Receiving Facilities in Tanzania	73

LIST OF FIGURES

Figure 2.1:	Governing Policy Legislations and Regulations.....	16
Figure 2.2:	Relationship among Key Actors in the Importation of Petroleum in Tanzania.....	19
Figure 2.3:	Units within the Petroleum and Gas Division with their role	21
Figure 2.4:	Units within the Petroleum Division with their role	23
Figure 2.5:	Detailed Process Descriptions on Coordination and Performance Measurement for Management of Importation of Petroleum Products	32
Figure 3.1:	Trend of Diesel Imported against Consumed from 2019 to 2022	34
Figure 3.2:	Trend of Petrol Imported against Consumed from 2019 to 2022	34
Figure 7.1:	Chronological Efforts for the Development of PIMP.....	79
Figure 7.2:	Demonstration of duration taken without Petroleum Emergency Plan.....	80



LIST OF ABBREVIATIONS AND ACRONYMS

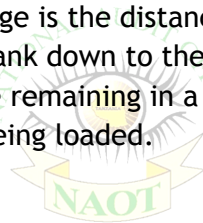
BPS	Bulk Procurement System
COD	Completion of Discharge
CP	Cathodic Protection
EIA	Environmental Impact Assessment
EWURA	Energy and Water Utilities Regulatory Authority
FYDP III	National Five Years Development Plan
GDP	Gross Domestic Product
GN	Government Notice
HFO	Heavy Fuel Oil
IDO	Industrial Diesel Oil
KOJ	Kurasini Oil Jetty
KPIs	Key Performance Indicators
LGAs	Local Government Authorities
LPG	Liquefied Petroleum Gas
MDAs	Ministries, Departments and Agencies
MoE	Ministry of Energy
MoU	Memorandum of Understanding
MT	Metric Tons
NACE	National Association of the Corrosion Engineers
NAOT	National Audit Office of Tanzania
NGOs	Non-governmental organisations
NPGIS	National Petroleum and Gas Information System
OMCs	Oil Marketing Companies
PBPA	Petroleum Bulk Procurement Agency
PBS	Petroleum Bulk Procurement System
PIDMP	Petroleum Infrastructure Development Master Plan
SBM	Single Buoy Mooring
SCADA	Supervisory Control and Data Acquisition
SPR	Strategic Petroleum Reserve
SRT	Single Receiving Terminal
TBS	Tanzania Bureau of Standards
TIPER	Tanzania International Petroleum Reserve
TPA	Tanzania Ports Authority
TPDC	Tanzania Petroleum Development Corporation

TRA	Tanzania Revenue Authority
TZS	Tanzania Shilling
UDSM	University of Dar es salaam
URT	United Republic of Tanzania
UST	Underground Storage Tanks
WMA	Weight and Measures Agency



DEFINITION OF TERMS

Bulk Procurement System	According to the Petroleum (Bulk Procurement) Regulation, 2017, a system was established to govern the importation of bulk petroleum products in the country.
Oil Marketing Company	A company licensed by EWURA to undertake a petroleum product wholesale business.
Petroleum	Any naturally occurring hydrocarbon, whether in gaseous, liquid or solid state.
Petroleum Products	Petroleum products are organic compounds, pure or blended, derived from refining or processing petroleum crude oils, biofuel, or synthetic fuels.
Ullage¹	The ullage is the distance from the reference point of the tank down to the liquid surface or the volume of space remaining in a tank to accommodate the liquid being loaded.



¹ *The Engineer's Guide to Tank Gauging, 2021 Edition*

EXECUTIVE SUMMARY

The importation of petroleum products in Tanzania through the Bulk Procurement System (BPS) has increased significantly in recent years due to commensurate growth of demand for local and transit. For instance, from 2019 to 2022, the importation of petrol has increased by 31%. During the same period, the importation of diesel has increased by 37%. Similarly, the country has an extensive network of 23 oil-receiving terminals at ports and 29 inland terminals with substantial storage capacities.

The main objective of the audit is to assess whether the Ministry of Energy through the Energy and Water Utilities Regulatory (EWURA), Petroleum Bulk Procurement Agency (PBPA) and Tanzania Petroleum Development Corporation (TPDC) have adequately managed the importation of petroleum to ensure adequate supply, prevent stock-outs and manage inventory levels in the country.

Main Audit Findings

(i) PBPA did not Analyse the Pattern and Trend of Petroleum Consumption During the Forecasting of the Demand

During the audit, it was found that PBPA did not consult EWURA and TRA to seek historical sales data from each OMC to analyse consumption patterns and trends. Instead, PBPA receives consumption data from EWURA for a particular month(s) and determines the monthly quantity to order for a certain month(s). This implies that PBPA did not conduct a pattern and trend analysis of the sales history in certain periods. This was attributed to PBPA relying on analysed data from EWURA.

(ii) Oil Market Companies do not Timely Pay Demurrage Costs to Suppliers

A review of payment revealed delays in the payment of demurrage charges to the supplier. As of June 2023, the unpaid demurrage amounted to USD 2,847,365.86, and it escalated to USD 7,108,913.35 by 22 September 2023, the time of this audit. BPA officials revealed reconciliation issues between suppliers and OMCs as a reason for the delays. Non-compliance with prompt payment presumes that the supplier has been fully paid and has no pending

demurrage claims. If the purchaser fails to pay, a guarantee will be encashed to settle the outstanding balance.

(iii) EWURA did not Detect OMCs who Maintained a Stock of Petroleum for less than 15 Days at all Times

The analysis of weekly reports from 2020 to 2023 found that not all Oil Marketing Companies (OMCs) adhered to the mandated stock levels. This means that OMCs maintained stocks below the required 15 days. These OMCs mandated stock levels ranged from 12% to 62% for petrol and 14% to 65% for diesel. Several issues were identified as contributing factors, including the tendency of EWURA to assess total fuel availability rather than individual OMCs' stocks, leading to a failure to identify non-compliant OMCs. Also, EWURA did not issue a report on market shares for each product, limiting its ability to enforce compliance and risking disruptions in the country's petroleum supply chain. Consequently, these issues compromise accuracy in assessing OMC's actual stock positions, which could pose risks to the security of the country's fuel supply chains.

(iv) The National Petroleum and Gas Information System (NPGIS) did not perform as required

Through a review of Contract No. AE/024/2018-19/HQ/C/39, the audit found that EWURA signed a contract with a consultant for the Supply, Installation, Commissioning and Testing of the National Petroleum and Gas Information System (NPGIS) in 2019 for TZS 480,673,800. The audit identified several discrepancies related to the operationalisation of NPGIS maintained by EWURA as mandated by Section 124(1) of the Petroleum Act No. 21 of 2015 as follows;

Delayed integration for Automated Data Capture: Although the NPGIS has been operational since November 2021, it has been unsuccessful in electronically and automatically capturing the real-time stock positions of petroleum products. Delays in identifying suitable operators' systems and excessive reliance on manual data logging contributed to this shortcoming. This limitation hindered EWURA's access to up-to-date operational data, impacting its ability to make informed decisions and respond promptly to anomalies or emergencies in the petroleum industry.

Ineffective enforcement of data submission: The audit found that not all OMCs and retailers submitted data, and among those who did, it was done partially and not daily as required. It was further found that 40% of the licensed wholesalers and 56% of the retailers partially submitted petroleum product stock level information daily, thus limiting the use of the system as intended.

Inadequate integration with key Government Institutions: NPGIS was intended to establish connections with key government institutions, including EWURA, Petroleum Upstream Regulatory Authority (PURA), Ministry of Energy (MoE), Ministry of Finance (MoF), National Bureau of Statistics (NBS), and at least five other organisations. The audit found that NPGIS had not successfully linked with these key government institutions. This problem has limited its effectiveness in enhancing data and information accessibility for monitoring, planning, development, and decision-making purposes.

(v) Uncertainty of the Protection of the Petroleum Infrastructures Against Potential Leaks

A review of the reports titled "EWURA Integrity Assessment of Receiving Facilities at Dar es Salaam, Mtwara, and Tanga," dated 18 August 2017, revealed containment losses due to corrosion-related leaks. In general, external corrosion was identified as a key issue due to the absence of a cathodic protection system in pipelines and the lack of corrosion protection for depot tank bottom plates.

Additionally, there is insufficient evidence of petroleum retailer operators adhering to established standards for safeguarding storage facilities, including tanks, pipelines, and steel equipment. Furthermore, the audit lacked a comprehensive database depicting the protection status of petroleum storage facilities at EWURA. As a result, EWURA has not effectively monitored the integrity of petroleum infrastructure for potential leaks.

This was attributed to EWURA not monitoring petroleum Operators who should have complied with Infrastructure Installation Standards and Specifications. Also, there is an overreliance on the EWURA's Rules without considering the TBS's standards and best practices. As a result, the noted

corrosion tended to weaken the structural integrity of facilities, potentially leading to leaks, spills, and accidents. This could potentially risk people's safety and harm the environment.

(vi) Limited Capacity of the Receiving Infrastructures

The audit found the limited capacity of the existing infrastructure for receiving petroleum products in the country. It was further revealed that the facilities had operated since 2012, when the monthly import volumes ranged between 200,000 and 250,000 metric tons. However, the same infrastructures are currently receiving 650,000 metric tons. As a result, fuel vessels are experiencing extended waiting times before unloading their cargo.

Additionally, a review of EWURA's reports for 2020 and 2021 revealed inefficiencies in the operation of Kurasini Oil Jetty 1 (KOJ1) compared to Single Buoy Mooring (SBM). The audit noted that limited berthing capacity, vessel interruptions, priority challenges, and non-prioritization of Single Buoy Mooring (SBM) white petroleum products were attributed to the inefficient operation of Kurasini Oil Jetty (KOJ).

Audit Conclusion

The audit concludes that the Ministry of Energy does not manage the importation process adequately to ensure a secure supply of petroleum products, prevent stock-outs, and manage inventory levels in the country. This is because PBPA was not adequately fulfilling its obligation to establish trends and patterns to properly forecast the demand for petroleum products. Instead, it relies on analysed data by EWURA. This anomaly could lead to potential inaccuracies in ordering, posing risks to the security of the petroleum products in the country. On the other hand, it was noted that OMCs reported having financial holds. However, they were still allowed to participate in the bulk procurement system.

In addition, EWURA did not adequately monitor and regulate the petroleum industry's stock levels effectively, particularly in petroleum stock maintained by OMCs. It was further noted that EWURA's oversight of the activities conducted by PBPA was inadequate. Furthermore, the existing infrastructure for receiving petroleum products has limited capacity, which

has resulted in extended waiting times for fuel vessels. This situation poses supply risks and leads to increased premiums.

Audit Recommendations

Recommendations to the Ministry of Energy

The Ministry of Energy (MoE) is urged to:

- (i) Prioritise the development of the Petroleum Infrastructure Master Plan and Petroleum Emergency Plan; and
- (ii) Coordinate the development of a single receiving infrastructure, development of ports receiving pipes at Dar es Salaam and Mtwara port for both diesel and petrol and development of pipelines to transfer petrol from the Single Buoy Mooring (SBM) to storage tanks or depots.

Recommendations to the Energy and Water Utilities Regulatory Authority

The Energy and Water Utilities Regulatory Authority (EWURA) is urged to:

- (i) Refine the methodology of establishing market share to ensure each oil marketing company (OMC) has a market share for each product and revise the stock monitoring reporting format to detect and take appropriate action. Each OMC should maintain physical stock for less than 15 days per Market Share at any time; and
- (ii) Develop Key Performance Indicators (KPIs) for evaluating the Bulk Procurement System's performance, measuring its achievement, and reporting the status to the responsible authorities for improvement.

Recommendation to the Petroleum Bulk Procurement Agency

The Petroleum Bulk Procurement Agency (PBPA) is urged to:

- (i) Improve the mechanism of establishing patterns and trends of historical sales data to undertake proper and reliable forecasts of petroleum demand.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Audit

The importation of petrol and diesel in the country through the Bulk Procurement System (BPS) has increased from 3,598,055,212 to 24,921,847,496 litres (equivalent to 37%) for diesel and from 2,161,476,884 to 2,825,300,730 litres (equivalent to 31%) for petrol from calendar years 2019 to 2022. The imported petroleum is for local and transit use. However, according to reports from EWURA (2019-2022), both use the same receiving and storage facilities available in Tanzania.

Tanzania has 52 oil terminals with a total capacity of 1,484,869 cubic meters. Twenty-three (23) oil receiving terminals are located at Dar es Salaam, Tanga, and Mtwara ports, with a total storage capacity of 1,409,244 cubic meters. On the other hand, 29 terminals are located upcountry, with a total storage capacity of 75,625 cubic meters (EWURA, 2022).

Under the Petroleum Act No. 21 of 2015, the petroleum supply chain in Tanzania is regulated. This covers the whole petroleum supply chain, from forecasting to the end user. Various institutions are involved in this process. The Ministry of Energy, Energy and Water Utilities Regulatory Authority, and Petroleum Bulk Procurement Agency were responsible for policy formulation, overseeing, regulating, and implementing the Petroleum Bulk Procurement System in Tanzania.

1.2 The Motivation for the Audit

This audit is motivated by two (2) main reasons. Firstly, as noted previously, the country's importation and use of petroleum products have increased. Secondly, there have been reported cases of low petroleum stock levels being held at any time. Taken together, these call for effective and efficient management of the importation of petroleum and petroleum products to reduce risks associated with inefficiencies in the security of the supply of petroleum in the country. Brief details are provided hereunder:

(i) A Notable Increased Consumption of Petroleum Products in Tanzania

According to the EWURA Report 2021, 4,113,238,620 litres of petroleum products were consumed in 2021. This is equivalent to a 13.4% increase compared to 3,627,103,444 litres consumed in 2020. Thus, the increased consumption of petroleum products calls for effective and efficient management of the importation of petroleum products that will match the consumption trend to avoid inadequate supply.

(ii) Reported Incidence of Drop in Petroleum Stock Levels in the Country

A review of the EWURA Mid and Downstream Petroleum Sub-Sector Performance Review Report of 2017 indicated that 34 Oil Marketing Companies (OMCs) failed to maintain a minimum stock of some petroleum products, such as kerosene. As a result, several reported petrol station operators in August and September 2017 claimed that they could not get petroleum products from some OMCs.

Also, the EWURA Mid and Downstream Petroleum Sub-Sector Performance Review Report, 2018, indicated a shortage of petroleum products such as petroleum and kerosene in the Mtwara and Tanga storage terminals, respectively. The report further indicated that the shortage was associated with an improper distribution plan concerning the demand for petroleum products in the respective regions.

Similarly, the EWURA Mid and Downstream Petroleum Sub-Sector Performance Review Report of 2019 reported an incidence of petroleum stock levels slipping below the required minimum of 15 days of consumption, the recommended level in October 2019. A similar case was again reported in the EWURA Mid and Downstream Petroleum Sub-Sector Performance Review Report, 2021, where there were reported cases of insufficient stocks of gasoline, diesel and heavy fuel oil with viscosities of 180 mm²/s (HFO 180) to meet the minimum stock demand levels of 15 days. These incidences reported in 2017, 2018, 2019, and 2021 might be associated with shortfalls in importing petroleum products.

Based on the established reasons, the Controller and Auditor General decided to carry out a performance audit on the management of the importation of petroleum in the country to examine the actual situation and suggest areas for improvement.

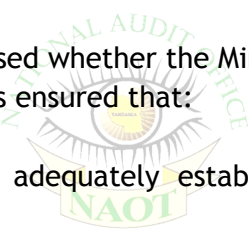
1.3 Audit Design

1.3.1 Audit Objective

The main objective of the audit was to assess whether the Ministry of Energy (MoE) through the Energy and Water Utilities Regulatory (EWURA), Tanzania Petroleum Development Corporation (TPDC) and Petroleum Bulk Procurement Agency (PBPA) has adequately managed the importation of petroleum to ensure adequate supply, prevent stock-outs and manage inventory levels in the country.

Specific Objectives

Specifically, the audit assessed whether the Ministry of Energy, through TPDC, EWURA and PBPA, has ensured that:

- 
- a) Demand forecasting adequately establishes the requirement for petroleum products;
 - b) Ordering and receiving of the petroleum are effectively performed;
 - c) Storage of the imported petroleum products is done adequately in terms of availability and safety of storage facilities and maintaining strategic reserves;
 - d) Periodical stock monitoring is effectively done to track and analyse the inventory levels and movements of petroleum products; and
 - e) Coordination and performance measurement of EWURA, TPDC and PBPA regarding the importation of petroleum is effectively done by the Ministry of Energy.

Five (5) main audit questions and sub-audit questions were developed to address the specific audit objectives above, as presented in *Appendix 2*.

1.3.2 Audit Scope

The main audited entities were the Ministry of Energy, which was audited through TPDC, EWURA, and PBPA. The Ministry of Energy is the country's overall policy formulator and overseer of the petroleum sector, including the management of imported petroleum. EWURA was selected because it is a regulatory body responsible for regulating the country's imported petroleum. On the other hand, PBPA and TPDC are the sectorial implementing agencies responsible for overseeing the country's imported petroleum management.

In particular, under the provisions of Regulation 7 of the National Strategic Petroleum Reserve Regulations of 2014, TPDC has been granted the mandate and responsibilities related to the National Strategic Petroleum Reserve. These responsibilities include installing, controlling, monitoring, and supervising the national strategic petroleum reserve to ensure its smooth operation. On the other hand, PBPA is responsible for coordinating and implementing the necessary procedures for procuring and importing petroleum, thereby ensuring the effective functioning of the Bulk Procurement System.

The audit mainly focused on managing the imported petroleum by which the Ministry of Energy, through EWURA, TPDC and PBPA, aimed to ensure adequate supply, prevent stockouts and manage inventory levels in the country. As such, this audit encompasses a comprehensive assessment of the entire process.

Specifically, the audit focused on assessing the adequacy of the forecasting to establish petroleum requirements, the effectiveness of processes related to ordering and receiving petroleum and the adequacy of the storage of the imported petroleum in terms of storage facilities and strategic reserves. The audit also focused on the efficiency of established mechanisms for periodic stock monitoring to track and analyse petroleum's inventory levels and movements. Furthermore, the audit focused on the Ministry of Energy's coordination and efficiency in EWURA, TPDC, and PBPA performance measurement.

In forecasting demand to establish petroleum product requirements, the audit focused on assessing respective market share through sales history data for each OMC and retailer to identify patterns and trends. Additionally, the audit examined whether compliance orders were issued to OMCs that submitted monthly requirements below their established local demand.

Regarding ordering and receiving petroleum products, the audit initially prioritised evaluating the efficiency of the process for collecting requirements from OMCs and assessing the effectiveness of consolidating these requirements and doing vessel configuration. Subsequently, during the receiving of the petroleum phase, the audit directed its attention towards aspects such as vessel laytime, the performance of individual receiving terminals, and strategies implemented to manage pipeline losses while receiving the petroleum products at the respective depots.

Regarding the adequate storage of imported petroleum products in terms of storage facilities and strategic reserves, the audit assessed the management of petroleum, focusing on assessing the storage facilities' safety aspects, such as measures to protect against pipe corrosion so as to prevent and minimize potential product losses. Also, petroleum storage facilities' capacity focusing on the availability and operationalization of strategic reserve sufficient storage facilities were assessed. Additionally, on strategic petroleum reserves, the audit assessed whether TPDC successfully developed the Strategic Petroleum Reserve (SPR).

In undertaking periodic stock monitoring of petroleum products, the audit focused on two key areas. Firstly, the effectiveness of EWURA in monitoring and verifying the stock /inventory levels of the petroleum in the storage facilities, to licensees' compliance in maintaining minimum petroleum stocks based on their market share to ensure stock availability sufficient for 15-days stock consumption. Secondly, to assess the use of NPGIS in monitoring petroleum stock.

In the assessment of the effectiveness of the Ministry of Energy in coordination and measuring the performance of PBPA, TPDC and EWURA in ensuring the security of supply of petroleum, the team assessed the Ministry of Energy's effectiveness in measuring the performance of EWURA, TPDC, and PBPA. This assessment encompassed aspects such as the completeness and reliability of data related to petroleum management, the system's

availability for capturing that data and how the Ministry uses them to evaluate the efficiency of the implementing agencies. Lastly, auditors also assessed the Ministry of Energy's capacity to coordinate tasks related to managing imported petroleum in the country, specifically focusing on establishing the petroleum master plan.

Notwithstanding the above, this audit focused on two categories of supply security concerning petroleum products. The first category ensures that the required minimum petroleum stocks, per market demands, are maintained for at least 15 days. The second category pertains to the strategic petroleum reserve, which is essential to serve during emergencies.

Overall, the audit focused on petrol and diesel. This is attributed to the fact that the two petroleum products are in high demand and, therefore, require effective and efficient management by the Ministry of Energy through TPDC, EWURA, and PBPA to ensure the country's supply security of petroleum.

Although the audit covered the entire nation, data was particularly collected in four distinct regions, namely, Dodoma, Dar es Salaam, Tanga, and Mtwara. Dar es Salaam was selected because it is a major business city with substantial consumption of petroleum products. On the other hand, Dodoma is the country's capital, where the Ministry of Energy is located. Similarly, Dar es Salaam, Tanga and Mtwara have oil jets where the imported petroleum products are discharged before being distributed to oil marketing companies. Therefore, these regions were deemed appropriate to provide contexts for importing petroleum products into the country.

This audit covered three financial years from 2020/21 to 2022/23. The period was selected because there was a global challenge in the supply chain of petroleum products due to the COVID-19 pandemic. Similarly, the three years were selected to establish the performance trend and draw relevant conclusions and recommendations.

1.3.3 Assessment Criteria

The audit used the following criteria for each specific audit objective regarding managing imported petroleum products in Tanzania.

a) Adequacy of demand forecasting and establishing the requirements of Petroleum products

Regulation 5 (h) of the Petroleum (Bulk Procurement) Regulations GN.198 of 2017 requires PBPA to forecast the supply and demand of petroleum products. Additionally, Para 1.3 (iii) of the Petroleum Bulk Procurement System Implementation Manual, 2020, requires PBPA to conduct diligent forecasts of petroleum products requirements by collecting requirements for the importation of petroleum products from OMCs and reconciling petroleum products forecasts with requirements submitted by OMCs and engage OMCs to adjust their orders where requirements submitted are less than the forecasts.

Also, Para 6.1 (iv) of the Petroleum Bulk Procurement System Implementation Manual, 2020, requires PBPA to issue compliance orders to all OMCs who submit monthly requirements below their established local demand. In addition, Regulation 14(5) of the Petroleum (Bulk Procurement) Regulations, 2017, requires EWURA to oversee all matters related to the supply of petroleum products in the country.

b) Effectiveness of ordering and receiving of Petroleum products

Para 10.2 (a) and (b) of the Petroleum Bulk Procurement System Implementation Manual, 2020, requires PBPA to receive and evaluate the order submitted by the OMC based on the quantity ordered, a 5% bank/cash guarantee, payment of fees payable to the Agency and other government institutions, and financial obligations of previous cargoes.

Also, clause 17.1 of the contract between PBPA and the supplier states that “laytime shall be 36 hours Saturdays, Sundays, Holidays included for a full cargo discharged at KOJ1 and 72 hours Saturdays, Sundays, Holidays included for a full cargo discharged at Single Buoy Mooring (SBM) Dar es Salaam, commencing 6 hours from tendering Notice of Readiness or upon vessel ‘All Fast’, whichever is earlier”.

Additionally, para 17 of the Petroleum Bulk Procurement System Implementation Manual, 2020 outlines that, in the single receiving operations, all petroleum products procured through the Bulk Procurement System shall be discharged into a Single Receiving Terminal (SRT) and, after that, distributed to the OMCs nominated terminals.

c) Adequacy of storage facilities of the imported Petroleum products

Rule 27(1)(b) of the Petroleum (Wholesale, Storage, Retail, and Consumer Installation Operations) Rules, 2022 states that “the licensee should, while storing, keeping, handling, conveying, using, or disposing of any petroleum product, take such precautions and exercise such care as may be reasonable under the circumstances to prevent the risk of significant environmental harm”.

Additionally, based on the National Association of the Corrosion Engineers (NACE international), Standard RP0285-2002 Item No. 21030, it is recommended to use a Cathode Protection (CP) system to protect the external parts of steel that are immersed in water or buried.

Furthermore, the National Strategic Petroleum Reserve Regulations GN. 198 of 2014 highlighted that the Strategic Petroleum Reserve (SPR) should be maintained in the storage facilities owned or rented by TPDC. Also, TPDC is obliged to install, control, monitor and supervise the smooth operation of the National Strategic Petroleum Reserve.

d) Adequacy of periodic stock monitoring of the imported Petroleum products by EWURA

Regulation 6 of the Petroleum (General) Regulations GN. 163, 2011 requires EWURA to ensure that each wholesaler maintains physical, operational stocks in quantities of not less than fifteen days at all times, depending on its market share for the previous year. Also, Petroleum (Marking and Quality Control) Rules, 2010 requires that all petroleum products imported for domestic use except those products that are tax exempted (including transit cargo) shall be marked with an approved marker in such a manner as shall be agreed in a contract between the Authority and the marking company. Further, Section 124 (1) of the Petroleum Act, 2015 states that there should be a National Petroleum and Gas Information System (NPGIS), which EWURA

shall maintain. Also, Section 124 (3) of the Petroleum Act, 2015 provides that NPGIS shall consist of an integrated and centralised information system containing appropriate data processing technology and covering all midstream and downstream gas activities and related installations, principal market activities, relevant statistics of the country and international reference data.

On the other hand, Objective C of EWURA, as presented in its Strategic Plan, 2021/22 - 2025/26, EWURA is required to conduct 100 inspections and monitoring of petroleum facilities annually to assess the extent of compliance with infrastructure standards, petroleum product maker test and petroleum products quality standards.

e) Coordination and periodic performance measurement of EWURA, PBPA and TPDC regarding the importation of Petroleum

Para 3.2 of the Energy Policy 2015 focuses explicitly on the Petroleum and Gas Sub-sector. This section establishes a comprehensive framework to govern activities related to petroleum upstream, midstream, and downstream operations. It further states that the Ministry of Energy is responsible for coordinating, monitoring, and evaluating the management of available stocks of petroleum products in the country. In undertaking the stated functions, the Ministry is supposed to coordinate and undertake periodic performance measurements of EWURA, TPDC, and PBPA regarding the importation of petroleum products into the country.

Section 182 of the Petroleum Act 2015 requires the Ministry of Energy to ensure the reliability of the supply of petroleum and petroleum products in the country and cause strategic reserves to be maintained in sufficient quantities and at a location that the Minister deems proper.

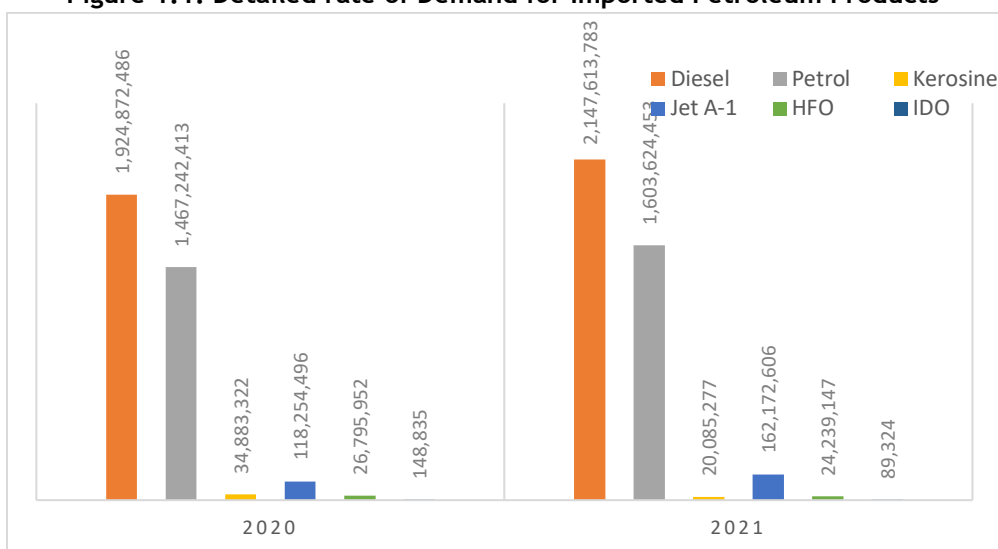
1.4 Sampling, Data Collection and Analysis Methods

The purposive sampling method was used to select the type of petroleum and regions to be covered. This sampling approach was adopted to collect reliable and sufficient audit evidence to achieve the intended audit objective.

1.4.1 Sampling of Types of Petroleum Products

Purposive sampling was used to select types of petroleum for this audit. The main types of petroleum used in the country include diesel, petrol, kerosene, Heavy Fuel Oil (HFO), Jet A-1 and Industrial Diesel Oil (IDO). This audit covered two (2) out of five (5) types of petroleum that were selected based on the demand rate. Data used for selection based on the demand rate was adapted from the last EWURA performance report, namely the “mid and downstream petroleum sub-sector performance report for the year 2021.” The report highlighted petrol and diesel as the most demanded petroleum products, as detailed in **Figure 1.1**.

Figure 1.1: Detailed rate of Demand for Imported Petroleum Products



Source: Auditors' Analysis from the Review of the Mid and Downstream Petroleum Sub-Sector Performance Reports for the year 2021

In this case, the audit selected products with a high demand rate compared to others because most transportation in Tanzania heavily relies on vehicles powered by diesel and petrol. These include cars, trucks, buses, motorcycles, and even boats. As the country's population and economy grow, the demand for transportation increases, leading to higher consumption of these products.

1.4.2 Selection of Regions Covered by the Audit

Furthermore, the audit utilised a purposive sampling method to select the visited regions. Two criteria were taken into account when choosing these regions. Firstly, the process began by designating areas like Dodoma, where the Ministry of Energy and EWURA are headquartered; on the other hand, PBPA is located in the Dar es Salaam region.

Secondly, the second criterion was centred on selecting regions with adequate receiving facilities capable of managing petroleum vessels. These regions include Dar es Salaam, Tanga, and Mtwara. **Table 1.1** details sampled regions.

Table 1.1: Selection of Regions Covered by the Audit

Region Selected	Factor Contributed to Selection	
	Ministry or Institution headquarters	Receiving Facilities
Dar es Salaam	✓	✓
Tanga		✓
Dodoma	✓	
Mtwara		✓

Source: *Auditors' Analysis (2023)*

1.4.3 Methods Used for Data Collection

Both qualitative and quantitative data were collected from the Ministry of Energy through TPDC, EWURA, and PBPA to provide evidence on the management of imported petroleum. Three methods were used to collect the required qualitative and quantitative data. These methods include interviews, document reviews and physical verifications, as detailed below:

a) Interviews

The interview method was used to collect information during the audit to respond to the questions and provide adequate conclusions against the audit objective. This was employed to obtain comprehensive, relevant, and reliable information on the performance related to the management of petroleum imports in the country. The interviews allowed the audit team to get a broader understanding of the audit areas and identify existing challenges, root causes and eventually, the consequences of those problems

and challenges. **Appendix 3** provides a detailed list of individuals and entities interviewed during the audit and their respective justifications.

b) Document Review

The audit conducted a thorough review of various documents to gather the necessary and relevant information for the audit. The review particularly focused on the relevant documents from the Financial Years 2020/21 to 2022/23.

The purpose of reviewing these documents was to ensure that the audit findings were well supported by corroborative evidence. The reviewed documents included planning documents, annual performance reports, and monitoring and evaluation reports. The reviewed documents enabled the audit to obtain appropriate and sufficient information supported by corroborative evidence. **Appendix 4** is a detailed breakdown of the documents reviewed and the justification for their review.

c) Physical Verifications

The audit was conducted on-site in three (3) regions to assess the management of imported petroleum in the country. These visits mainly aimed to evaluate the adequacy of the system in place, which included a cathodic protection system aimed at the corrosion protection measures for underground steel tanks and pipes.

Also, the visits aimed to evaluate the protection measures for above-ground steel structures physically, specifically the coating and painting of tanks and pipes. This assessment was crucial, as failure to adhere to proper measures in these aspects could potentially result in leakage of petroleum products. As such, auditors visited oil receiving terminals in three ports, Dar es Salaam, Mtwara and Tanga, to evaluate the management of receiving facilities, including pipes.

During the site visits, the audit team interviewed various officials involved in managing available stocks of petroleum products in the country. These interviews aimed to gather information on their roles and responsibilities. During the visits, relevant, appropriate and sufficient audit evidence was gathered through various mechanisms, including note-taking and pictures.

1.4.4 Methods for Data Analysis

Various methods were employed in analysing data depending on the nature of the data and available evidence. Quantitative data were organised, summarised and compiled using software for data analysis. The analysed data were presented in different ways, such as tables, graphs and charts. On the other hand, the qualitative data, mainly from interviews, were transcribed, described, compared, and related so that they could be extracted and explained as findings.

The analysis involved looking for categories such as events, descriptions, consistencies, or differences from the gathered data. Both the gathered quantitative and qualitative data were compared with their respective audit criteria for consistency.

1.5 Data Validation Process

To ensure the validity of the collected information and their analysis, the Ministry of Energy, EWURA, TPDC, and PBPA were allowed to review the draft report and comment on the information presented. They confirmed the validity of the information presented in the draft report. The draft report was also cross-checked and discussed with experts in the importation of petroleum products in the country. Their comments and suggestions have been incorporated into the report.

1.6 Standards Used for the Audit

The Audit was conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAIs) issued by the International Organization of Supreme Audit Institutions (INTOSAI). These standards require the audit to be planned and performed to obtain sufficient and appropriate evidence to provide a reasonable basis for findings and conclusions based on the audit objective.

1.7 Structure of the Audit Report

This report is structured into nine (9) Chapters as follows:

Chapter One:
•Provides Introduction to the audit, Motivation and Design of the audit
Chapter Two:
•System Description of the Management of the Importation of Petroleum Products
Chapter Three:
•Extent of the Importation of Petroleum Products in Tanzania
Chapter Four
•Findings on the Forecasting, Ordering and Receiving of the Petroleum Products
Chapter Five
•Findings of Stock Monitoring and Regulating Petroleum Industry in Tanzania
Chapter Six
•Findings of the Petroleum Strategic Reserve, Receiving and Storage Infrastructure
Chapter Seven
•Findings on Coordination and Efficiency of the Performance Measurement for PBPA, EWURA and TPDC by Ministry of Energy
Chapter Eight
•Audit Conclusion
Chapter Nine
•Audit Recommendations

CHAPTER TWO

SYSTEM FOR MANAGING THE IMPORTATION OF PETROLEUM PRODUCTS IN THE COUNTRY

2.1 Introduction

This chapter describes the system for managing the importation of petroleum products in Tanzania. It presents the governing legal framework guiding the petroleum activities, key stakeholders and responsibilities. It also provides strategies and the processes involved in managing the importation of petroleum products in the country.

2.2 Legal Framework Governing Importation of Petroleum Products

The following are the policies, laws, regulations, and manuals governing the importation of petroleum products in Tanzania.

2.2.1 Governing Policy Legislations and Regulations

The importation of petroleum is guided by the following policies, legislations, and regulations, as presented in **Figure 2.1**.

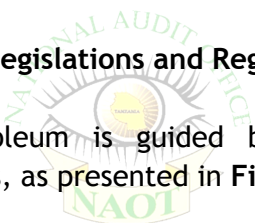
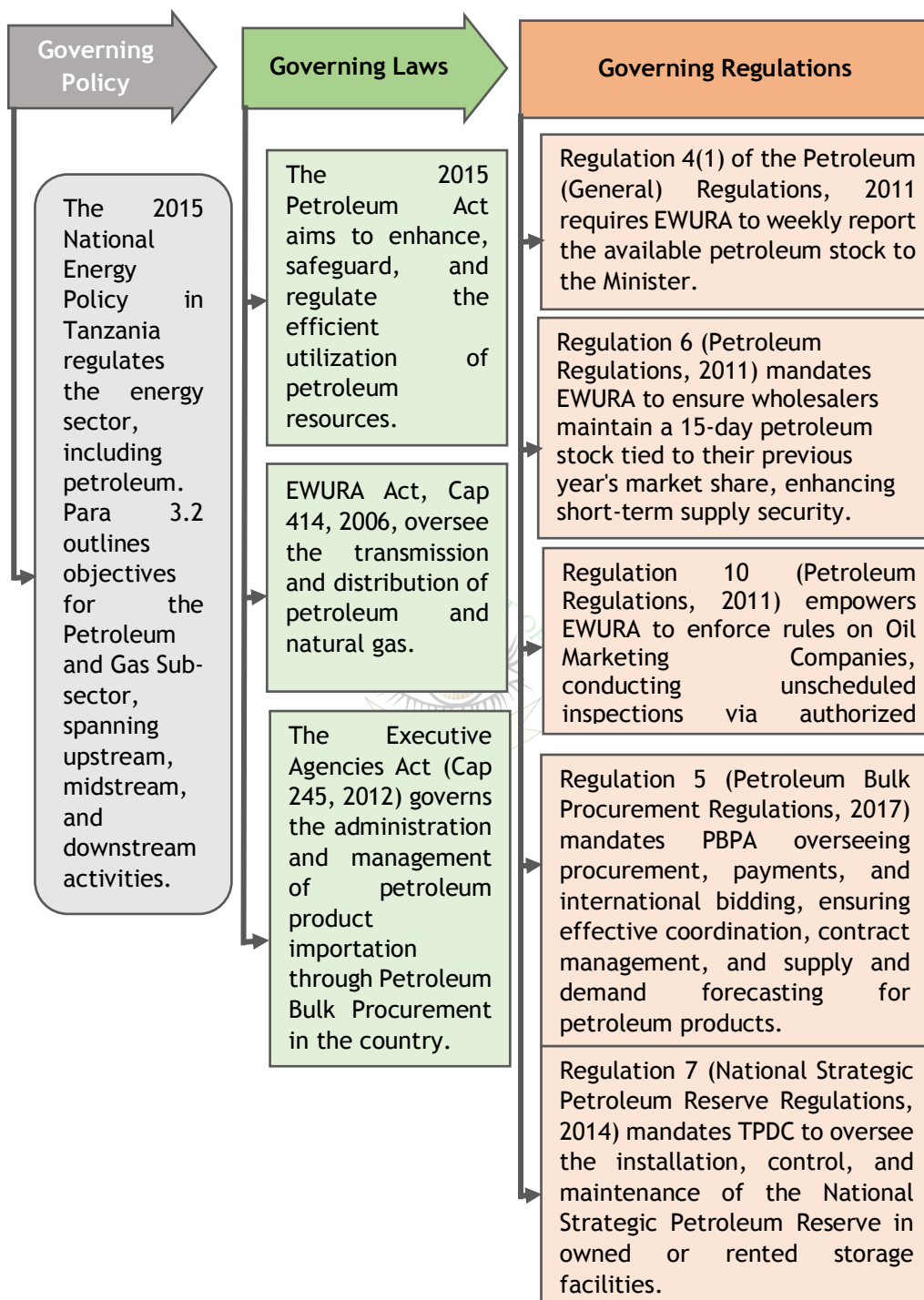


Figure 2.1: Governing Policy Legislations and Regulations



2.2.2 Rules and Manual

a) Petroleum (Wholesale, Storage, Retail and Consumer installation operations) Rules, 2018

Rule No. 2 of the Petroleum (Wholesale, Storage, Retail, and Consumer Installation Operations) Rules, 2018 provides guidance on the licencing and obligation of the licensee for wholesale, storage, retail of petroleum products, consumer installation operations, and related matters in Mainland Tanzania, but shall not apply to petroleum retail businesses in villages and small towns.

Also, Rule No. 2 and 25 of the Petroleum (Wholesale, Storage, Retail, and Consumer Installation Operations) Rules, 2018 state that a wholesaler shall not import petroleum products unless the importation is conducted through efficient procurement under the provisions of the Petroleum (Bulk Procurement) Regulations.

b) Petroleum Bulk Procurement System Implementation Manual, 2020



The Petroleum Bulk Procurement System implementation for Mainland Tanzania is outlined in the Petroleum Bulk Procurement System Implementation Manual, 2020. This manual provides the procedures for procuring and importing petroleum products. The overall purpose is to ensure the efficient functioning of the bulk procurement system.

The manual also provides procedures that govern various aspects of the procurement process, such as the invitation of bids, evaluation, determining bid qualification, and awarding contracts to the suppliers of petroleum products in bulk. It also guides all operational activities concerning procuring petroleum products under the Bulk Procurement System (BPS). This includes conducting pre-arrival checks, managing single receiving operations (including pre-discharge operations, discharge operations, and post-discharge outturn), and handling customs and warehousing procedures.

2.3 Goals, Objectives and Strategies

Through the establishment of the EWURA and PBPA, the Government aimed to ensure effective supervision, monitoring and regulation of the petroleum products industry. This includes overseeing procurement of the petroleum products, receiving, storage and distribution, and trade activities with the goal of promoting sustainable development.

Additionally, the Government seeks to attract and empower the private sector to take a leading role in petroleum exploration, production, refining, and marketing. This strategy aims to increase the contribution of the petroleum sector to the Gross Domestic Product (GDP) and address poverty by integrating the industry with the overall economy.

The strategies adopted by the Ministry of Energy and other actors in importing petroleum into the country are shown in *Appendix 5*.

2.4 Roles and Responsibilities of Key Actors and Stakeholders

Effective management of the importation of petroleum is a collective responsibility that requires collaboration among government and non-government actors at various levels, from local to international. The government is the primary actor responsible for ensuring the successful management of the country's importation of petroleum. At the same time, other stakeholders include petroleum suppliers, who typically operate across borders, oil marketing companies, importers (wholesalers) and service stations/distributors.

The summarised functional relationship of the above key actors and stakeholders engaged in importing petroleum products in Tanzania is presented in **Figure 2.2**.

2.4.1 Role and Responsibilities of Key Actors

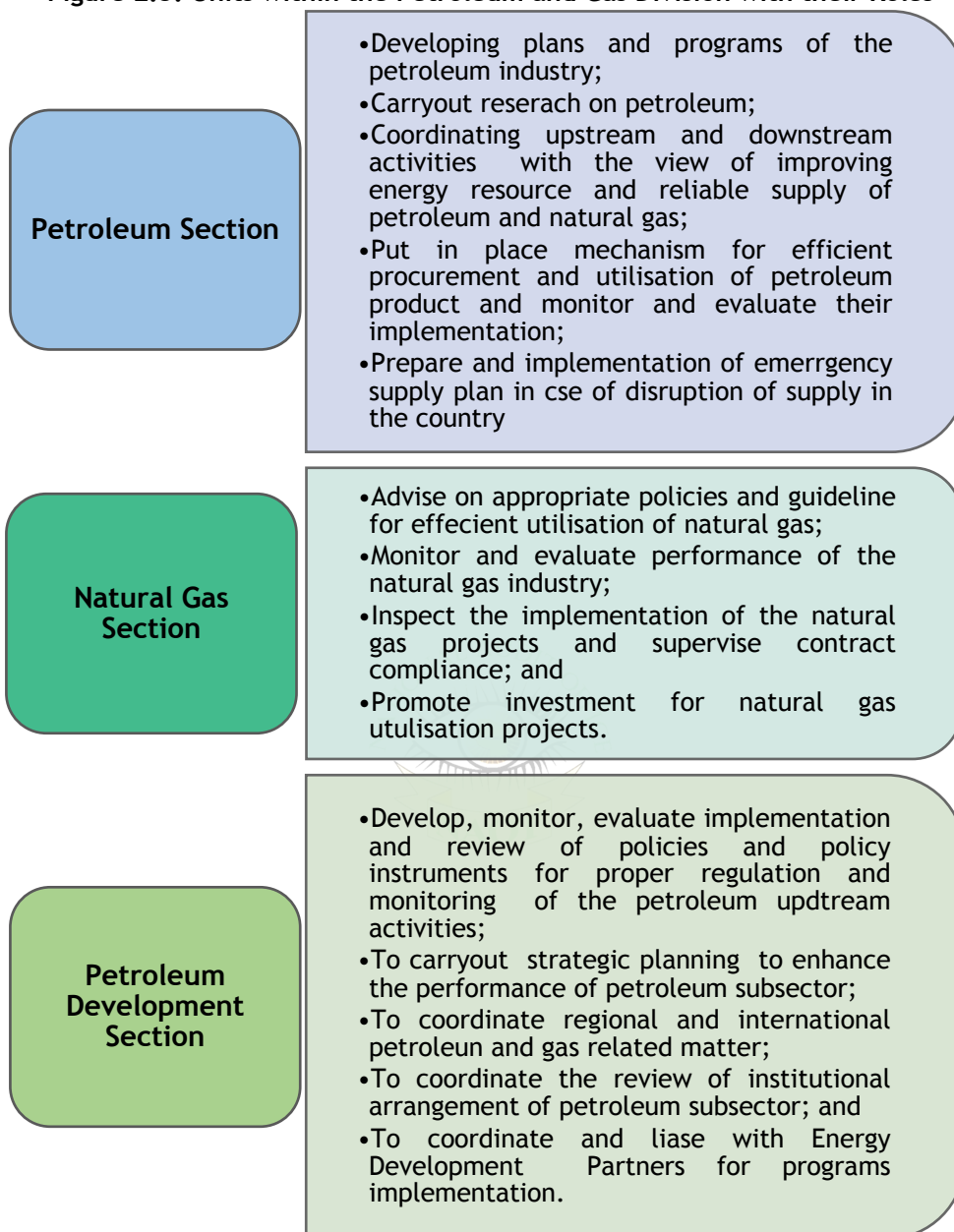
(i) Ministry of Energy

Section 5 of the Petroleum Act of 2015 mandated the Ministry of Energy to administer and control all issues concerning the Energy sector. In particular, Section 5 of the Petroleum Act of 2015 stated that, among other roles, the Petroleum and Gas Division shall supervise the petroleum industry and, in that respect, discharge the following functions:

- (i) Develop and implement policies and plans;
- (ii) Formulate and review Government policies and regulations in the petroleum industry;
- (iii) Enter into petroleum agreements on behalf of the Government;
- (iv) Ensure and sustain transparency in the petroleum sub-sector;
- (v) Conduct inquiries into accidents or disasters caused by petroleum activities;
- (vi) In consultation with the Tanzania Bureau of Standards and by order in the gazette, approve the application of technical specifications, standards, and quality control norms for the protection of public health, safety, and the environment, and ensure the safety of operations in the petroleum supply chain.

Also, the Petroleum and Gas Division has three sections, namely the petroleum, natural gas, and petroleum development sections, as explained in **Figure 2.3**.

Figure 2.3: Units within the Petroleum and Gas Division with their Roles




Source: *Auditors' Analysis of Organisation Structure and Function of Ministry of Energy (2023)*

(ii) Energy and Water Utilities Regulatory Authority (EWURA)

In fulfilling its responsibilities and obligations in the petroleum sub-sector, EWURA must adhere to and enforce the Petroleum Act of 2015, which is the legislation governing the sector. As the regulator in the midstream and downstream petroleum sub-sector, EWURA oversees all matters related to the supply of petroleum products in the country per the provisions of the Petroleum Act of 2015 through the Petroleum Division.

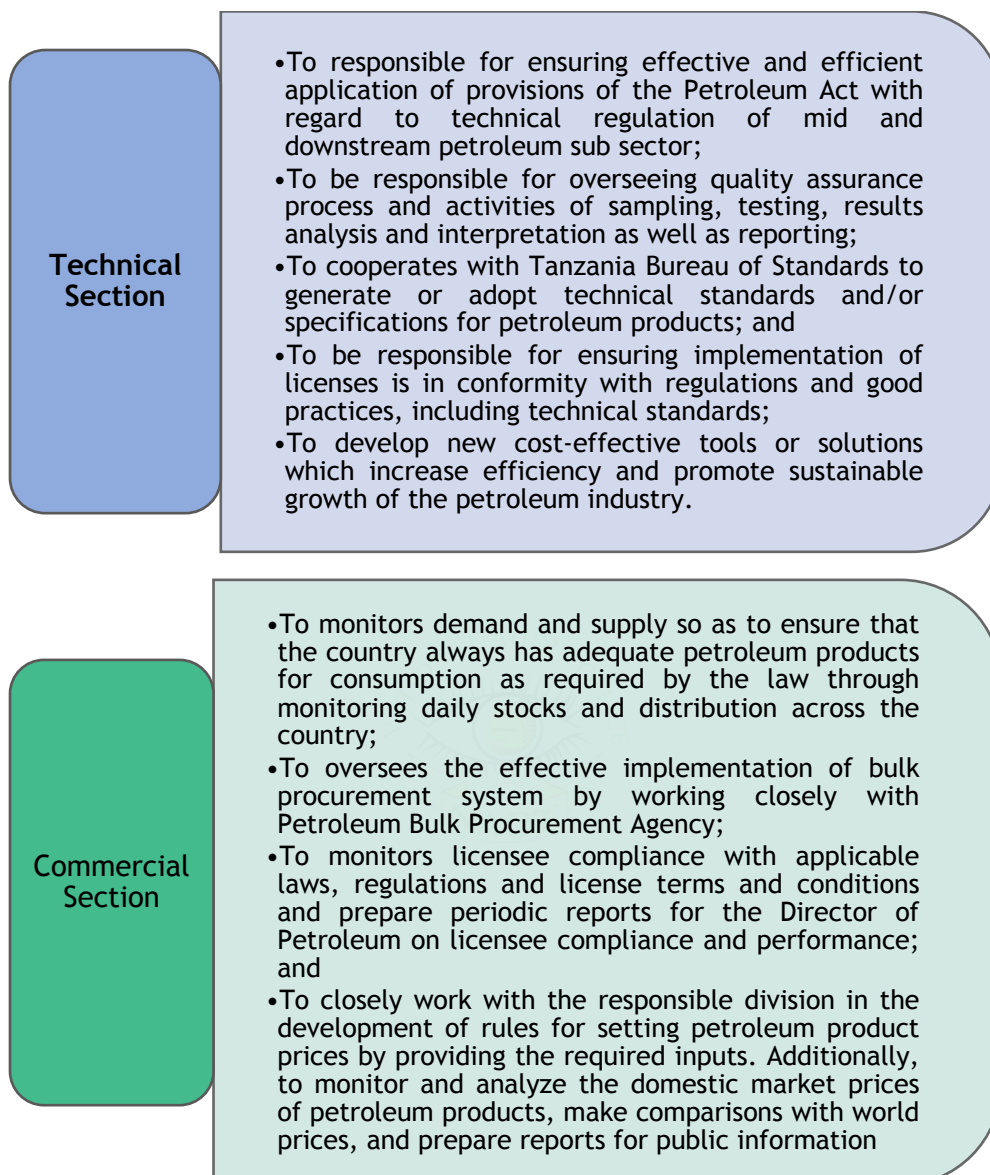
On the other hand, section 170 of the Petroleum Act 2015 requires EWURA to establish procedures for the off-loading of petroleum and petroleum products by taking into consideration (a) the sensitivity of the product, (b) the national stock position, and (c) non-discrimination amongst licensees.

In general, the Authority is entrusted with regulating the mid- and downstream petroleum sub-sector in Tanzania's Mainland, encompassing regulatory functions related to technical, economic, and safety aspects. EWURA implements these regulatory functions through its Petroleum Division, and in particular for this sub-sector, the roles include to:

- 
- a) Monitor for the sake of ensuring the security and quality of petroleum product supply in the country;
 - b) Optimize costs in respect of the procurement, storage, transportation and distribution of petroleum products;
 - c) Attract investment through licensing in the petroleum midstream and downstream operations, thus helping to ensure reliability in the supply of petroleum products throughout the country; and
 - d) Create a level playing field to protect the interests of efficient service providers or suppliers.

The Petroleum Division has two sections, namely the technical and commercial sections. Two units within the Petroleum Division are presented in **Figure 2.4**.

Figure 2.4: Units within the Petroleum Division with their Role



Source: *Auditors' Analysis of Organisation Structure and Function of EWURA (2023)*

(iii) The Petroleum Bulk Procurement Agency (PBPA)

The Petroleum Bulk Procurement Agency (PBPA) is an Executive Agency established under the Executive Agencies Act, Cap.245, with the mandate of coordinating and managing efficient procurement of petroleum products through the Petroleum Bulk Procurement System (BPS). PBPA, through its

two Divisions, namely the Petroleum Planning Division and Supply and Logistic Division, forecasts demand and supply, gathers procurement requirements from Oil Marketing Companies (OMCs) and conducts international competitive bidding for bulk petroleum products.

To ensure transparency, PBPA regularly reports to the Ministry of Energy and EWURA and takes charge of contract administration associated with the importation of petroleum products. Additionally, PBPA oversees efficient product receipts, maintains shipment records, and appoints inspectors to guarantee adherence to quality and quantity standards.

(iv) Tanzania Petroleum Development Corporation (TPDC)

According to the National Strategic Petroleum Reserve Regulations of 2014, the Tanzania Petroleum Development Corporation (TPDC) is mandated to assume the custodian role in implementing and establishing the Strategic Petroleum Reserve (SPR). This designation entrusts TPDC with the responsibility of overseeing and managing the various aspects related to the creation and maintenance of the Strategic Petroleum Reserve, a critical component in ensuring the country's energy security and resilience in the face of potential disruptions in the petroleum supply chain. As a result, this has impeded the achievement of the objectives, which include the following:

- (i). To provide reserves of petroleum products in physical stock in selected localities in the country;
- (ii). Ensure continuity of supply all the time, in normal conditions and in case of national or international petroleum supply chain disruption or shortage of petroleum products;
- (iii). Responding to incidents such as natural disasters or other interruptions of petroleum distributions in the country; and
- (iv). Stabilise the domestic oil price.

2.4.2 Role and Responsibilities of other Stakeholders

Collaboration between private stakeholders and the government is crucial for efficiently managing petroleum products. While various private stakeholders are involved, most Oil Marketing Companies (OMCs) through service stations/distributors serve as private stakeholders, except TPDC through TANOIL, which operates as an OMC and retailers.

Service stations/distributors - these companies deal directly with final consumers of petroleum products. Service stations/distributors comprise those owned/supplied by importing Oil Marketing Companies (OMCs) and those not affiliated/contracted to any of the importing OMCs. The presence of a shortage of petroleum products becomes immediately eminent to the general public. They are the providers of market requirements to the OMCs.

OMCs report their petroleum product requirements to the Petroleum Bulk Procurement Agency (PBPA) and directly inform EWURA regarding any matters concerning the stock position of petroleum products.

Suppliers: As private stakeholders, suppliers exchange information with the Petroleum Bulk Procurement Agency (PBPA) concerning the procurement of petroleum products. This includes sharing relevant information regarding the submission of bids and the subsequent awarding of contracts to suppliers to provide petroleum products in the country. Many suppliers are private companies, except for TPDC.

2.5 Resources for the Managing the Importation of the Petroleum Products

Adequate availability of financial and human resources plays a vital role in enhancing the monitoring of stock levels of petroleum products in the country. The resources explicitly allocated for the importation of petroleum within the main audited entities, i.e. Ministry of Energy, EWURA and PBPA, are described as follows:

2.5.1 Financial Resources

This part presents the funding arrangements for importing petroleum, especially for the stock monitoring of petroleum by the Ministry of Energy. **Table 2.1** indicates the fund allocation and disbursement from the financial year 2020/21 - 2022/23.

Table 2.1: Allocated Fund for the Managing the Importation of the Petroleum at the Ministry of Energy - Division of Petroleum and Gas

Financial Year	Approved Budget (TZS Million)	Expenditures (TZS Million)
2020/21	394	Information not availed
2021/22	207	199
2022/23	215	57

Source: Auditors' Analysis of Information Extracted from MTEF and Fourth Quarter Progress Reports

As seen from **Table 2.1**, the Ministry of Energy (MoE) budgeted a total of TZS 816 million to cater for activities related to importing petroleum products in the country for three financial years. It also shows the expenditure was TZS 256 Million for the two financial years 2021/22 - 2022/23, where the expenditure data were availed.

Similarly, **Table 2.2** summarises the financial resources allocated for activities of the Petroleum Division at EWURA for three financial years.

Table 2.2: Budgeted and Expenditures for Activities of the Petroleum Division at EWURA

Item	Financial Year		
	2020/21	2021/22	2022/23
Budget (TZS Billion)	1,865,632,302	2,333,869,902	2,834,651,673
Expenditures (TZS Billion)	1,841,379,082	2,309,841,851	2,827,222,606
Percentage expenditure (%)	99	99	100

Source: Auditors' Analysis of Information Extracted from MTEF and Fourth Quarter Progress Reports

The budget analysis in **Table 2.2** shows that the Division of Petroleum at EWURA expended 99%, 99% and 100% for the financial years 2020/21,

2021/22, and 2022/23, respectively. This implies that the authority allocated sufficient resources for financing petroleum-related activities, and the resources were sufficiently spent as allocated.

Furthermore, **Table 2.3** summarises the financial resources allocated to the PBPA for the three years.

Table 2.3: Allocated Fund for Importation of the Petroleum at PBPA

Activity	Financial Year		
	2020/21	2021/22	2022/23
Indicative Budget (TZS)	9,127,440,000	12,235,139,590	12,239,235,500
Actual Expenditure (TZS)	6,866,214,534	9,124,566,845	10,631,307,351
Percentage Expenditures (%)	75	75	87

Source: Auditors' Analysis of Financial Statement for the Financial 2020/21, 2021/22 and 2022/23

Table 2.3 shows PBPA's financial resource utilisation for 2020/21, 2021/22, and 2022/23, and budget and expenditures increased.

For the period covered in this audit, TPDC had not allocated financial resources specific to establishing and operating a strategic petroleum reserve (SPR). It is expected to be included in its budget for the next financial year.

2.5.2 Human Resources

Human resources are crucial in the overall management of the country's importation of petroleum products. **Table 2.4** shows staff distribution across the regulatory agencies and the Ministry of Energy at the Department of Petroleum and Gas.

Table 2.4: Status of Human Resources for Management for Importation of Petroleum at Ministry of Energy

Designation	Required Number	Available Number	Deficit
Geologist II	Not provided	2	-
Senior Engineer II		2	-
Principal Engineer II		2	-
Senior Geologist		1	-
Petroleum Engineer		1	-
Total		7	-

Source: Auditors' Analysis of Information Extracted from IKAMA (2022/23)

Table 2.4 shows that the Ministry of Energy did not state the required number of staff for managing petroleum stock in the country. The Ministry of Energy revealed that the existing Engineers and Geologists are exposed to the oil and gas industry and can handle petroleum-related activities. In addition, the Ministry has employed a Petroleum Engineer dedicated, among other things, to managing petroleum-related activities.

Table 2.5 summarises the staff distribution within EWURA.

Table 2.5: Human Resource Requirements for the Management of the Importation of Petroleum at EWURA

Designation	Available Number	Required Number
Manager	1	Information not availed
Principal Financial Management Officer	1	
Senior Financial Management Officer	2	
Financial Management Officer	1	
Total	5	

Source: Auditors' Analysis of Information Extracted from EWURA Staff Establishment (2022/23)

As shown in Table 2.5, EWURA Staff involved in the importation of petroleum were five (5); however, information about the required staff for regulation of the importation of petroleum products in the country was not available.

Table 2.6 presents human resources for PBPA to manage the importation of petroleum products.

Table 2.6: Human Resource Requirements for the Management of the Importation of Petroleum Products at PBPA

Designation	Required Number	Available Number	Deficit
Principal Engineer II	1	1	0
Principal Supplies Officer II	1	1	0
Senior Supplies Officer	1	1	0
Supplies Officer	1	1	0
Engineer I	19	14	5
Senior Marketing Officer	1	1	0
Stock Analyst	2	2	0
Total	26	21	5

Source: Auditors' Analysis of Information Extracted from Human Resources Establishment (2022/23)

As shown in Table 2.6, with the exception of the position of Engineer I, PBPA has a required number of staff to effectively implement its activities related to the importation of petroleum in the country.

2.6 Process Description for the Importation of the Petroleum in the Country



The importation of petroleum products in the country involves several key stages. Each stage entails specific strategies for effective management. A summary of these approaches and their respective strategies is presented in Table 2.7 below:

Table 2.7: Summarized Description of Processes Involved in Importation, Storage and Monitoring the Stock of Petroleum

Process/Activity	Description	Responsible Entity	Expected Output
Demand Forecasting	PBPA consolidates the orders and sends them, and in case they are not enough, PBPA writes to OMCs to increase their orders according to their market shares.	PBPA	Importation of petroleum according to the required quantity of each OMC
Order, Receiving and Consolidation	PBPA receives forecasted orders from OMCs to be imported two months later		Established demand for all petroleum that meets or matches the actual consumption
Importation of Petroleum	PBPA float tenders and reliable suppliers are obtained, petroleum is imported through different vessels, and each vessel has its own scheduled date for arrival.		Simulation Report for each OMCs based on market share, Imported Petroleum
Receiving and Storage	Schedule for vessel delivery date range	PBPA, in collaboration with other TPA, TASAC, WMA & TBS	Products received are of the right time, quantity and quality
	Inspection of vessels and petroleum by TBS to make sure the cargoes arriving are of the right quality		
	Inspection by WMA is needed to make sure the vessels that arrive contain the		

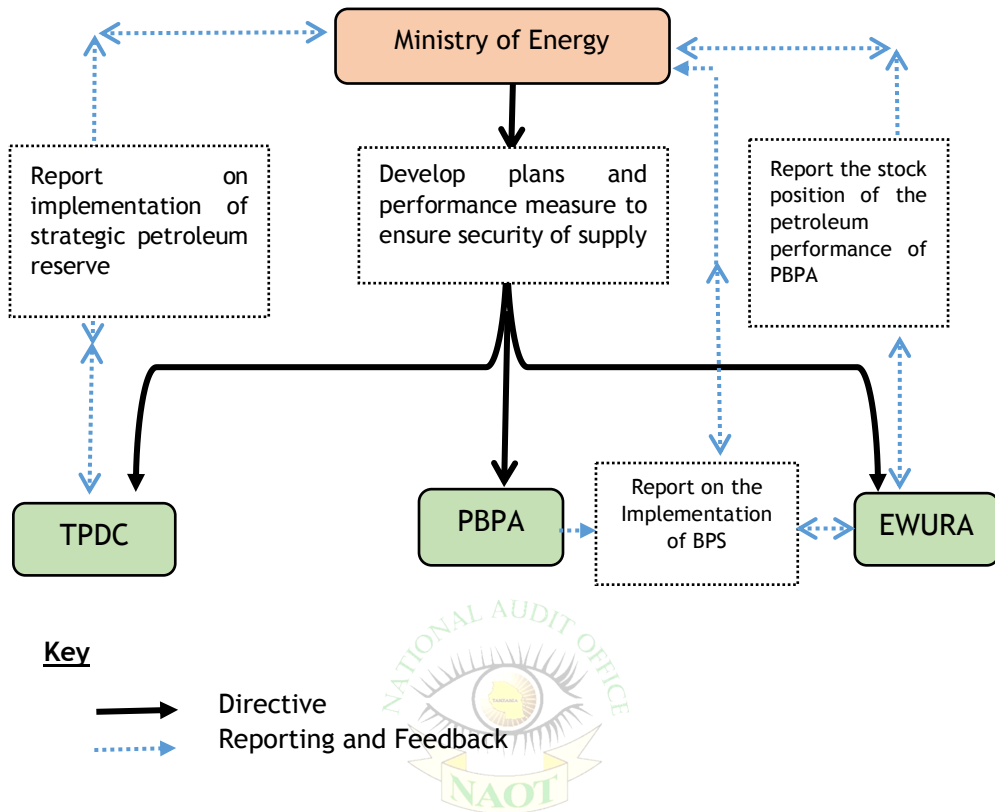
Process/Activity	Description	Responsible Entity	Expected Output
	ordered quantity of petroleum.		
	Coordination and witnessing by different surveyors from different party representatives, i.e., suppliers, PBPA, and EWURA		
Stock Monitoring of petroleum in the country	Physical verification of the available stocks from OMCs by EWURA: OMCs prepare and send daily and weekly stock reports to EWURA to determine the status of the received stock and when to place an order for another stock.	EWURA	Weekly and Daily reports from OMCs
			Physical Verification Reports prepared by EWURA

Source: Auditors' Analysis of Petroleum Act and its Regulations, order and Manual, 2020

2.7 Process Description of Coordination and Performance Measurement for the Management of Importation of Petroleum Products

The system for managing coordination and performance measurements of the importation of petroleum in the country encompasses several key components overseen by the Ministry of Energy. This description, as presented in **Figure 2.5**, provides an in-depth understanding of each component and its role in ensuring the security and efficiency of the petroleum supply chain.

Figure 2.5: Detailed Process Descriptions on Coordination and Performance Measurement for Management of Importation of Petroleum Products



CHAPTER THREE

EXTENT OF MANAGEMENT OF IMPORTATION OF PETROLEUM PRODUCTS IN THE COUNTRY

3.1 Introduction

This chapter presents the extent of the management of the importation of petroleum products in the country as assessed based on the extent to which the stock of imported petroleum is maintained to meet the minimum market consumption demand. It was also assessed based on the extent of the availability of strategic petroleum infrastructures to ensure the security of the supply of petroleum products in the country.

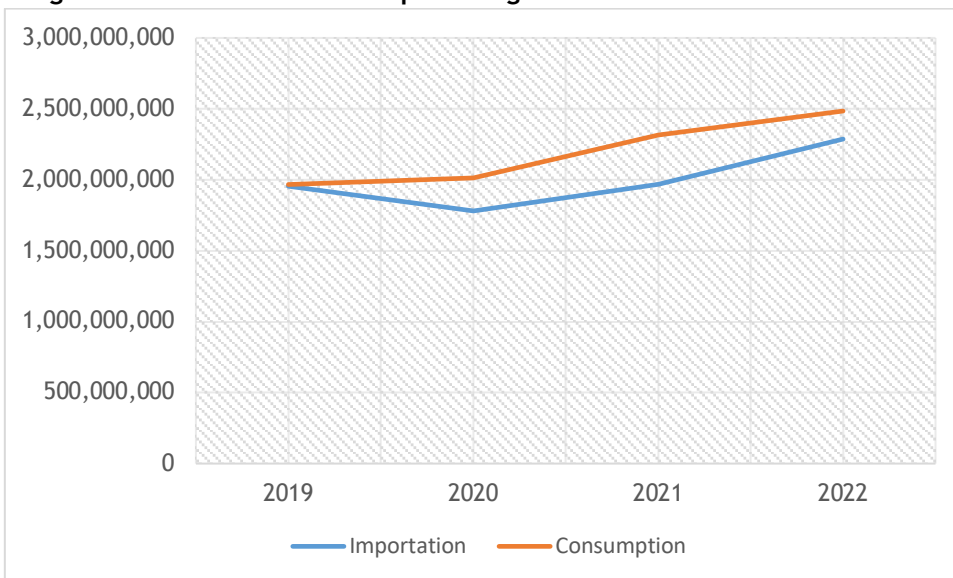
3.2 The Extent of Maintaining Minimum Petroleum Stock in the Country

The audit noted that the stock of petroleum was not maintained to meet the minimum stock required for the country's consumption, as further elaborated below: -

(i) At the national level, imported volume was relatively lower than the consumption

Section 182 of the Petroleum Act, 2015 requires the Ministry of Energy to ensure the reliability of the supply of petroleum and its products and the maintenance of sufficient quantities. However, our analysis of consumption rate and importation volumes from 2019 to 2022 showed that the quantities of the imported volumes maintained were relatively lower than the consumption (refer to **Figures 3.1** and **3.2**).

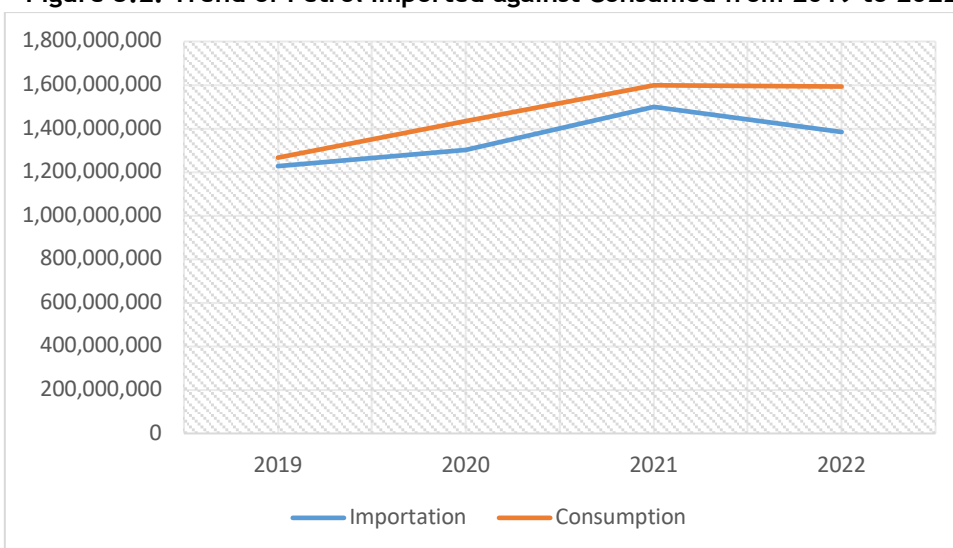
Figure 3.1: Trend of Diesel Imported against Consumed from 2019 to 2022



Source: Auditors' Analysis of EWURA Mid and Downstream Petroleum Sub-Sector Performance Report from 2019 to 2022

Figure 3.1 indicates that from 2019 to 2022, imported fuel volume was lower than consumed. Also, the same situation was experienced in the importation and consumption of petrol, as presented in Figure 3.2.

Figure 3.2: Trend of Petrol Imported against Consumed from 2019 to 2022

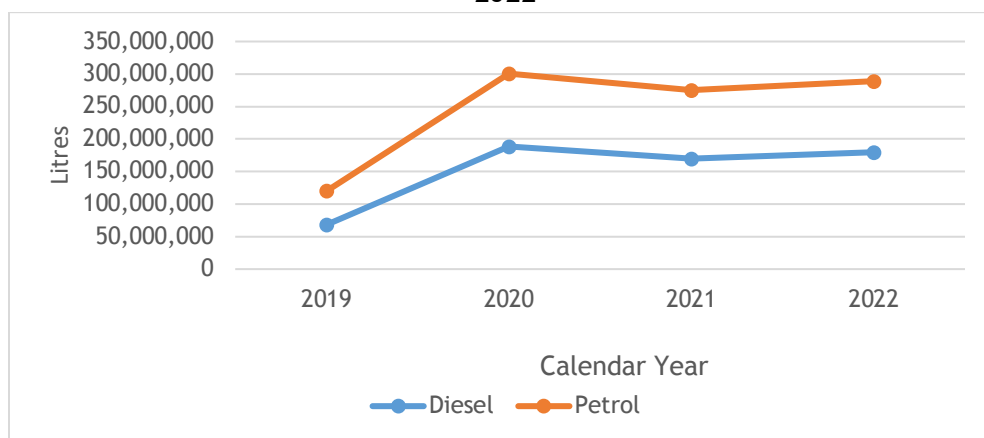


Source: Auditors' Analysis of EWURA Mid and Downstream Petroleum Sub-Sector Performance Report from 2019 to 2022

Figure 3.2 indicates that, from 2019 to 2022, the volume of fuel imported was relatively lower than consumed.

This was attributed to shortfalls in forecasting petroleum to be imported for domestic consumption, which resulted in the localisation of petroleum designated for transit. **Figure 3.3** presents the amount of localized on-transit fuel from 2019 to 2022.

Figure 3.3: Trend of Localized On-transit Petroleum Products from 2019 to 2022



Source: Auditors' Analysis of EWURA Mid and Downstream Petroleum Sub-Sector Performance Report from 2019 to 2022

Figure 3.3 indicates that, from 2019 to 2020, there was an increase in the amount of localized on-transit petroleum and diesel. It also shows that from 2020 to 2022, the amount of localized petroleum remained almost constant for both petrol and diesel.

The implication of the anomaly where imports are lower than consumption implies OMCs are delaying import tax earnings for the Government through the use of transit products, where taxes are paid at the time of localisation as opposed to the time of importation. In addition, the security of supplies is also compromised.

3.3 The Extent of Availability of Petroleum Infrastructures in the Country

The audit acknowledges the government's efforts through the Ministry of Energy, EWURA, and PBPA regarding the country's investment in petroleum infrastructure. The most notable achievement was the Installation of Petroleum Products Discharge and Back Loading Monitoring System. This system is designed to fully monitor real-time data on petroleum discharge and back-loading operations at the 22 terminals located in Dar-es-Salaam, Tanga, and Mtwara. As of January 2024, the system was in the testing stage and was expected to be commissioned in March 2024. This system is designed to continuously monitor all fuel flow meters while unloading the imported petroleum from ships. Thus, the system will facilitate early detection of possible fuel losses, such as vandalism during discharging, thereby reducing product losses.

Furthermore, during the transitional period leading to the development of infrastructure for single receiving points, the government has continued to utilise the TIPER Company's infrastructure as a single receiving terminal (SRT). In light of the efforts undertaken, the audit found various shortfalls which require improvements.

In a review of the EWURA Integrity Assessment of Receiving Facilities at Dar es Salaam, Mtwara, and Tanga Study, Document Number: 16011-EN-RPT-004, dated 18th August 2017, it was found that there was one pipeline from the Jetty bringing in multiple products (petrol and diesel) to tank farms (GM and OILCOM Mtwara terminal tanks). Consequently, when multiple products are received, the single line is flushed with air to clean the line before the next product is received. This poses a risk of contamination and is also time-consuming.

Furthermore, in the reviews of the letter dated 31 October 2022, with reference number PBPA/MOE/730/2022, which PBPA sent to the Ministry of Energy, it was noted that the existing infrastructure for receiving petroleum has limited capacity. The review revealed that these facilities had operated since 2012, when the monthly import volumes ranged between 200,000 and 250,000 metric tons. However, the same infrastructure is currently receiving 650,000 metric tons.

As a result, vessels are experiencing extended waiting times of up to 33 days beyond the allowable time of 3 days for Single Buoy Mooring (SBM) and 1.5 days for the Kurasini Oil Jetty (KOJ) before they can unload their cargo, as discussed in detail under **Section 4.3.3** of this report. This was due to the low capacity of infrastructures to receive high-volume discharges at both the berthing and storage facilities. Because of the delays in discharge, the vessels' turn-around time becomes unpredictable and may cause vessel owners to hedge against it. This also increases demurrage charges, as presented in part 4.3.1 in this report.

According to the review of the letter with ref.No.HA.141/273/01/Vol.II/15 dated 2 January 2024, EWURA revealed that the government, through TPA, has an investment plan geared at improving the receiving facilities at the port, particularly KOJ1. Further, a consultant had been engaged to conduct a feasibility study for constructing a depot and receiving facilities.



CHAPTER FOUR

FINDINGS ON THE FORECASTING, ORDERING AND RECEIVING OF THE PETROLEUM PRODUCTS

4.1 Introduction

This chapter provides insights into how PBPA forecasted petroleum and used the data in demand assessment to ensure the country's supply security for imported petroleum products. It also examines their procedures for ordering and receiving petroleum. These processes are vital in ensuring the country's petroleum supply's security.

4.2 Forecasting of Petroleum Demand

Regulation 5(h) of the Petroleum (Bulk Procurement) Regulations GN.198 of 2017 required the PBPA to forecast the supply and demand of petroleum products. Therefore, this section presents findings about forecasting the petroleum demand by PBPA and using the forecasted demand data to ensure the security of the supply of petroleum products in the country.

The audit noted that PBPA forecasts petroleum products annually to project the volume of petroleum products imported for local consumption under the Bulk Procurement System (BPS). However, the analysis of the approach used by PBPA in forecasting reveals a number of shortfalls in its effectiveness as explained below:

4.2.1 PBPA did not Analyse Patterns and Trends of Petroleum Sales while Forecasting the Demand for petroleum

Para 6.1(c)(ii)(c) of the Petroleum Bulk Procurement System Implementation Manual, 2020 requires PBPA, in consultation with TRA and EWURA, to review importation and sales history data for each OMC to identify patterns and trends and produce a six-month rolling importation forecast every month.

In a review of PBPA forecast information, the audit found that PBPA did not consult EWURA and TRA to seek sales history data from each OMC to identify patterns and trends. Instead, PBPA received analysed daily

consumption data for the country from EWURA to determine the monthly quantity to order for a certain month(s) until EWURA informs it of the change in consumption rate.

In responding to this observation, officials from PBPA indicated that they use reliable data from EWURA (daily consumption rates) or other third parties to perform their forecasting duties for petroleum products imported within the country through BPS. Officials further indicated that, due to the changes in the consumption of petroleum products in the country, the Agency reviews (rolls) monthly to accommodate current changes, which will be reflected in the six-month future projection.

However, the audit found that the daily consumption rate used by PBPA could not justify the availability of the sales history data from each OMC, which could have enabled it to analyse patterns and trends of consumption over a specified period. This implies that PBPA did not do a trend analysis of the sales history in certain periods.

Furthermore, regarding demand forecasting tools, Officials from PBPA indicated that the Agency is using Excel to forecast petroleum products to be imported through BPS, which also performs rolling importation forecasts. Officials indicated that it is economical and reliable and adds value to the forecasting function. However, based on the PBPA response, the Audit found that PBPA was unclear on which standard method is used to establish patterns and trends during forecasting.

This was attributed to PBPA relying on analysed data from EWURA. The result of not analysing consumption patterns and trends to properly forecast the demand for petroleum to be imported into the country creates the possibility of importing less amount for local use than the needed fuel, as stated in **Section 3.2**. This necessitated OMCs to localise (to use their on-transit fuel stock for local consumption) to avoid stockouts.

4.3 Management of Ordering and Receiving of Petroleum Products in the Country

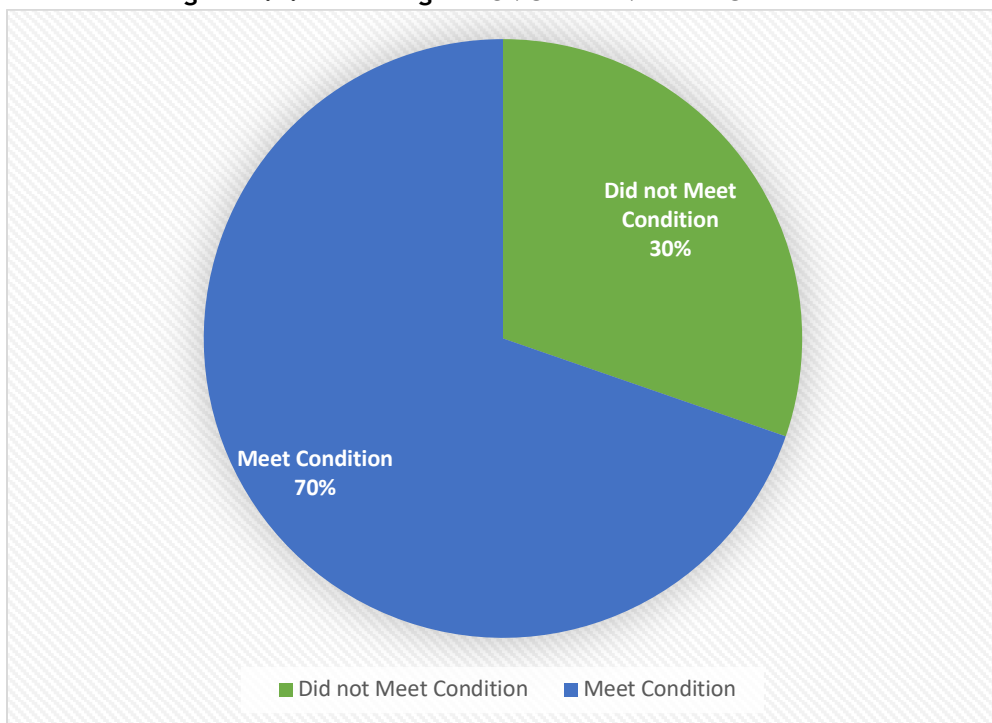
This section presents findings about ordering and receiving petroleum products in the country through the Bulk Procurement System as presented hereunder:

4.3.1 A total of 10 out of 33 Oil Marketing Companies (equivalent to 30%) did not meet the ordering condition of the ordered amount

Para 10.2 (a) of the Petroleum Bulk Procurement System Implementation Manual, 2020, requires PBPA to receive and evaluate the order submitted by OMCs based on the quantity ordered, a 5% bank/cash guarantee, payment of fees payable to the Agency and other government institutions, and financial obligations of previous cargoes.

After reviewing the quantity of petroleum allocated for OMCs in September 2023 and analysing the guarantee submitted as a condition for placing an order, the audit found that a total of 10 out of 33 OMCs (equivalent to 30%) did not meet the conditions of order as presented in **Figure 4.1**.

Figure 4.1: Percentage of OMCs that Met the Condition



Source: Auditors' Analysis of Submitted Orders for September 2023 and the Guarantee, 2023

Figure 4.1 indicates that 70% of OMCs meet the conditions for ordering the fuel quantities.

PBPA responded that its core function is to ensure the security of the supply of petroleum products within the country. The purpose of setting conditions was to institute discipline within BPS operations.

In response, PBPA also stated that during this period, the world was experiencing challenges due to the Russia-Ukraine war, whereby the demand and supply of petroleum products in the world were not in equilibrium. This crisis resulted in an extraordinary rise in the cost of procuring petroleum products, which drastically increased the usage of USD beyond planned levels and ultimately contributed to the scarcity of USD in the country. This challenge was beyond OMCs' reach. Because of the critical situation explained, PBPA found it prudent to accept orders from all OMCs to guarantee the security of supply within the country. At the same time, the government, through the Bank of Tanzania (BoT), intervened to address the challenge of the availability of USD to ensure that petroleum products are financially cleared (paid).

Moreover, PBPA indicated that if they could stick to this requirement and restrict potential OMCs who have substantial market share, it would have caused shortages of supply in the country and other neighbouring countries that depend on BPS as their supply channel for petroleum products in their countries.

However, PBPA revealed that the revised Regulation and BPS Manual took these changes into account and reduced the rate of bank guarantee from 5% to 3%. This initiative guaranteed the security of supply in the country even during difficult situations that impacted the availability of petroleum products worldwide.

Further, the audit did not find a waiver of the condition in the manual during the crisis to address the emerging situation. This poses a risk to the Petroleum Bulk Procurement System's operations, particularly if OMCs fail to finalise payments and create ullage for discharge.

4.3.2 Oil Market Companies (OMCs) with Fuel in Financial Holds Participating in the Bulk Procurement System

Clause 14.17 of the contracts between the suppliers and PBPA requires the purchaser who fails to pay or open a Letter of Credit for the ordered product within five (5) days after Completion of Discharge (COD) and the product has been discharged as a product on financial hold shall be barred from participating in BPS until it has fulfilled all pending obligations.

The audit found some OMCs had a record of financial holds and were still participating in BPS in the following months, as shown in Table 4.1.

Table 4.1: Status of OMCs Reported having Fuel in Financial Holds

Range of Frequency Reported (moths)	No. of OMCs
0 - 12	24
13 - 24	10
25 - 36	1
Total	35

Source: Auditors' Analysis of OMCs with Financial Holds (2023)

Table 4.1 indicates that 11 out of 35 OMCs were frequently reported to have products held on financial hold for over 12 months.

PBPA responded that the problem of financial hold was much experienced after the eruption of the Russia-Ukraine war, where the world experienced a shortage of supply of USD currency after the United States of America changed its policies regarding international business.

Since prices of petroleum products were pegged in USD, clearance of respective consignments has been slow due to the scarcity of USD, which has created ullage constraints. PBPA opined that, in this situation, restricting the participation of OMCs in BPS due to the financial hold would negatively impact the security of supply within the country. This is partly attributed to the fact that all OMCs, including those with large market shares, had most of their products on financial hold.

Notwithstanding the above remarks, to ensure the security of supply is maintained, PBPA and key stakeholders established mechanisms to resolve the situation. The established mechanisms ensured that the petroleum

products under financial hold were cleared without restricting OMCs from participating in BPS during this period when the world was experiencing a shortage of the US dollar. The mechanism agreed upon by stakeholders was to ensure that every OMC would access the products after providing financial clearance.

However, the audit found that, due to financial holds:

❖ ***There were reported ullage constraints that limit efficiency in the Petroleum Bulk Procurement System***

The review of the letter with Ref. No. PBPA/EWURA/464/2022 from EWURA to PBPA dated November 3, 2022, indicated that PBPA requested that EWURA enforce OMCs to uplift about 146,106,547 litres of petroleum held at TIPER due to financial holds. On November 9, 2022, EWURA informed the OMCs to uplift products stored at the TIPER Terminal to create ullage for incoming vessels. EWURA particularly informed OMCs that they would bear all the costs resulting from the delay to discharge associated with ullage constraints.

Clause 15.3 of the contracts between PBPA and suppliers states that “when there are ullage constraints as a result of the OMCs who did not create sufficient ullage to receive the ordered product, they shall be deemed to have distorted BPS, attract penalties as prescribed in the Petroleum (Bulk Procurement) Regulations, 2017 of 0.5 USD per MT per day, and also be liable to pay demurrage for the delay”.

However, auditors found no records of charges against OMCs due to the ullage constraints distorting BPS.

Regarding the evacuation of petroleum products from TIPER (which is used as an interim single receiving terminal), OMCs were not penalised since there is no legal ground to impose penalties on this matter. Nonetheless, penalties were imposed on OMCs if there was direct receipt of petroleum products from the vessels to the terminal owned by OMCs. In this situation, once it is found that the nominated terminal by OMCs has no ullage, the penalties are imposed. Nevertheless, to ensure efficient implementation of the Petroleum Bulk Procurement System, there is a need to ensure that OMCs that cause ullage constraints are charged as per requirements of the contracts entered between PBPA and Suppliers.

PBPA stated that it makes close follow-up during discharge operations and communicates with both parties (suppliers and OMCs) to ensure efficient discharge of petroleum products from vessels; hence, once OMC has an ullage constraint, the alternative terminal is promptly nominated to avoid delays, and thus no penalties were passed on to OMCs since ullage issues were timely addressed.

Further, PBPA responded that OMCs were not penalised since there is no legal ground to impose penalties on this matter. Nonetheless, penalties are imposed on OMCs if there is direct receipt of petroleum products from the vessels to the terminal owned by OMC. In this situation, once it is found that the nominated terminal by OMC has no ullage, the penalties are imposed.

To address this challenge of evacuating products from TIPER, the agency has reviewed its regulations in the BPS manual and signed a Memorandum of Understanding with TIPER. Having all these new instruments has created legal ground to penalise the receivers (OMCs) who fail to remove their products from TIPER within the allowable time.

Despite the above explanation provided by PBPA, the audit identified the following risks.

- ❖ *There was a risk of a Supplier increasing Premiums during tendering to hedge against the risk of delays in Payment*

A review of the letter with ref. No. PBPA/NISHATI/694/2022 from PBPA to the Ministry of Energy revealed that the increasing trend of financial hold may increase the risk of suppliers increasing premiums.

4.3.3 The trend of Delays in Starting to Discharge Increased from 66% to 68% in Financial 2020/21 to 2022/23 Respectively

Clause 6.1 of the contract between the Petroleum Bulk Procurement Agency (PBPA) and the supplier indicates the delivery date range that must be strictly adhered to. Also, clause 17.1 of the contract requires the laytime to be 36 hours for a full cargo discharged at KOJ1 and 72 hours for a full cargo discharged at Single Buoy Mooring (SBM) Dar es Salaam, commencing

6 hours from tendering Notice of Readiness or upon vessel 'All Fast', whichever is earlier.

After reviewing contracts and delivered records, the audit found that delays in starting to discharge have increased from 66% to 68%, as presented in Table 4.2.

Table 4.2: Percentage of Vessels Delayed to Discharge

Financial Year	Total No. of Vessel	Total No. of Vessels Discharged Immediately	Total No. of Vessels Delayed to Discharged	% of vessels Delayed to Discharged
2020/21	107	36	71	66
2021/22	110	36	74	67
2022/23	104	33	71	68

Source: Auditors' Analysis of Contracts and Delivered Records (2023)

Table 4.2 shows that, in percentage terms, the trend of vessels delayed to discharge in time has increased from 66% in the Financial Year 2020/21 to 68% in the Financial Year 2022/23. Further analysis shows that, on average, the maximum time vessels were delayed to discharge was 33 days, as shown in Table 4.3.

Table 4.3: Status of Vessels Delayed

Financial Year	Total No. of Vessels Delayed to Discharge (n)	Maximum Days Delayed (n)
2020/21	71	21
2021/22	74	17
2022/23	71	33

Source: Auditors' Analysis of Contracts and Delivered Records (2023)

As shown in Table 4.3, the maximum delay that was ever recorded was 33 days. Further analysis of the extent of delays is presented in Table 4.4.

Table 4.4: Extent of Delays

Financial Year	Total No. of Vessels Delayed to Discharge (n)	Range of delays		
		0 - 7days	7 - 14 days	> 14 days
2020/21	71	44	20	7
2021/22	74	57	15	2
2022/23	71	35	21	15

Source: Auditors' Analysis of Contracts and Delivered Records (2023)

Table 4.4 shows that the number of vessels delaying to commence discharging for 7-14 days and more than 14 days was greater in the financial year 2022/23 than in the previous years.

In response, PBPA stated that the main challenge related to the delay is associated with using the same petroleum-discharging infrastructures without upgrading them. At the same time, there is a substantial increase in demand. The records show that, since BPS was established in 2012, the average monthly importation of petroleum products (local and transit) into the country was 250,000 metric tonnes of all products. In the current scenario, the monthly importation requirements have increased to an average of 650,000 metric tonnes. This is more than twice when compared to the previous demand.

The above observation suggests that the infrastructure used for discharging petroleum products within the country cannot accommodate the free period given under the Charter Party of 3 days (72 hours) for Single Buoy Mooring (SBM) and 1.5 days (36 hours) for Kurasini Oil Jetty (KOJ). PBPA emphasised that the matter is worse for KOJ, where the same infrastructure and BPS vessels are also used to receive vegetable oil vessels and heavy fuel oil vessels and backload them into vessels destined for Zanzibar.

Currently, PBPA receives requirements for PMS (petrol), which can be accommodated into five (5) vessels and one (1) vessel for JET-A1, whereby the average discharge of each vessel is four (4) to five (5) days. On the other hand, vegetable oil vessels take three (3) to four (4) days, and heavy fuel oil vessels take two (2) days. All these vessels use the same jetty, Kurasini Oil Jetty 1 (KOJ1). With the existence of this jetty and to ensure supply security, a back-to-back system is used during the arrangement of delivery date ranges, which guarantees the vessels are always available at the outer anchorage for the continuity of utilising the jetty.

However, for the two vessels that were delayed to start discharging for more than 30 days, the cause of such delays was as follows:

- ❖ HAFNIA LOTTE, having Tender Number PBPA/PPP/PMS/C4-KOJ1/09/2022 (Supplier SAHARA Energy Resources Ltd.) of September 2022, had a delivery date range of October 8 to 10, 2022. The vessel arrived on October 5, 2022, and started to discharge on

November 12, 2022. An ullage constraint mainly caused the delay in the discharge of this vessel. This was due to the high volume of transit products in the country. PBPA took the initiative by engaging stakeholders to review their transit orders to reduce the impact of too many transit products staying within the country without being evacuated on time. Further, to decongest Dar es Salaam port, other vessels were rescheduled to discharge their products at Tanga port during this period (Refer to Addendum 03: Assorted Minutes of Weekly Stakeholders Meetings).

- ❖ SILVER ENTALINA, having Tender Number PBPA/PPP/PMS/C5-KOJ1/09/2022 (Supplier AUGUSTA Energy DMCC) of September 2022, had a delivery date range of 13 to 15 October 2022. The vessel arrived on 11 October 2022 and commenced discharging on 16 November 2022. The vessel had a similar challenge to the one explained above.

Apart from the infrastructure constraints, as explained by PBPA, the audit noted that the vessels were assigned a delivery date range, and previous vessels delayed discharge caused assigned vessel delays to start discharging, as presented in Tables 4.6, 4.7, and 4.8.

The following consequences were noted as a result of delay of vessels to start discharging in time:

- (i) A total of **USD 26,934,426.35** demurrage charges for days waiting to commence discharge

A total of 1,417.8025 days were accounted for in the demurrage of USD 26,934,426.35 (equivalent to TZS 67,336,065,875 at an exchange rate of TZS 2500/USD). This is (after excluding 6 hours for shift change, 36 or 72 hours allowable for KOJ1 and SBM, respectively, time used to discharge and time associated with the default of either supplier, OMCs, or others). More details are presented in Table 4.5.

Table 4.5: Charges Incurred for Delay in Starting to Discharge Fuel

Financial Year	Total No. of Vessels Delayed to Discharged (n)	Total Number of Days Delayed (n)	Total Demurrage charges incurred in USD
2020/21	71	453	8,241,890.75
2021/22	74	329	6,322,120.00
2022/23	71	636	12,370,415.60
Total	216	1,418	26,934,426.35

Source: Auditors' Analysis of Contracts and Delivered Records (2023)

Table 4.5 indicates that about USD 26,934,426.35 was incurred as demurrage charges caused by waiting time for the vessels to commence discharging after considering allowable time.

(ii) The trend of Vessels discharge within a particular Month was declining from 74% to 65%

Reviewing the contracts between PBPA and suppliers, the audit found that the trend of vessel discharging within the respective month was declining. The trend of vessel discharging within the allocated time declined from 74% to 65% between the Financial Years 2021/22 and 2022/23, as shown in Table 4.6.

Table 4.6: Status of Vessels Discharged within a Particular Month

Financial Year	Total No. Vessels	Discharging Status		Percentage of Discharge within Allocated Time (%)
		Beyond the Allocated Time	Within Allocated Time	
2020/21	107	29	78	73
2021/22	110	29	81	74
2022/23	104	36	68	65

Source: Auditors' Analysis of Contracts and Delivered Records (2023)

Table 4.6 shows that the percentage of vessels discharging within the allocated time has decreased from 73% in 2020/21 to 65% in 2022/23.

This implies that 35% of the monthly stock consumed in 2022/23 was not planned.

The interviews with PBPA officials suggested vessels were not discharging within the agreed delivery dates because of the interruptions associated with requests for priority berthing. These requests for priorities were associated with the backloading of fuel to Zanzibar or for transit fuel, as well as defaults associated with OMCs, such as the absence of ullage, readiness, and financial hold.

The audit found that interruption cannot be avoided due to the existing infrastructure. However, the situation can be minimised by properly forecasting the planned delivery dates based on previous experience and communicating with other stakeholders who cause interferences.

Clause 6.1 of the contracts between PBPA and the suppliers states that the delivery date range must be strictly adhered to. A review of the Contract between the Supplier and the delivery record shows that the percentage of vessels that did not arrive within the delivery date range was 13%, 25% and 22% for 2020/21, 2021/22, and 2022/23, respectively. These details are presented in **Table 4.7**.

Table 4.7: Indicates the Arrival Status of Vessels

Financial Year	Total Number. of Vessels	No. of Vessels which Delay to Arrive within the Delivery Date	Percentage of Vessels Delayed (%)
2020/21	107	14	13
2021/22	110	28	25
2022/23	104	23	22

Source: Auditors' Analysis of Contracts and Delivered Records (2023)

Table 4.7 shows that in the financial year 2021/22, the percentage of vessels that did not arrive on time is equivalent to 25%, higher than in the financial years 2020/21 and 2022/23.

Upon further analysis, the audit found that the trend of vessels delayed in arriving varied within the delivery date for at least ten days (Refer to **Table 4.8**).

Table 4.8: Extent of Vessels Delayed

Financial Year	Total Number of Vessels noted to Delays to Arrive (n)	Range of days Delayed	Number of vessels Delayed for more than ten days (n)	Percentage of Vessels Delays for more than ten days (%)
2020/21	14	1-9	0	0
2021/22	28	1-10	0	0
2022/23	23	1-12	1	4

Source: Auditors' Analysis of Contracts and Delivery Records (2023)

Table 4.8 shows that delays for more than ten days occurred once within the three (3) financial years. This implies that if OMCs had maintained fuel capacity for 15 days at all times, the reported delays could not have caused stock-outs.

Through the Tanzania Ports Authority (TPA), the government has awarded the contract for the joint venture of M/s China Railway Major Bridge Engineering and M/s WUHUAN Engineering through a letter with reference No. MB. 108/431/12/106 dated 29 November 2023 for the construction of a single receiving terminal for a period of 24 months to address the problem associated with the delay in discharge.

4.3.4 Oil Marketing Companies did not Timely Pay Demurrage Costs to Suppliers

Clause 18.9 of the contract between PBPA and the Supplier requires the Oil Marketing Companies to pay the prorated final demurrage cost within fourteen (14) calendar days of receipt of the invoice from the Supplier.

A review of the record shows that, in each financial year, there were outstanding demurrage costs, as presented in **Table 4.9**.

Table 4.9: Status of Unpaid Demurrage Cost Due as of 22 September 2023

Suppliers	Overall, Balance (in US \$) as of June 2023	Outstanding Demurrage Balance (in US\$) as of 22 September 2023
Supplier 1	983,108.98	2,627,858.76
Supplier 2	90,275.45	0.00
Supplier 3	6,294.48	590,452.72
Supplier 4	241,154.71	1,720,810.36
Supplier 5	1,012,182.20	0.00
Supplier 6	0.00	42,917.40
Supplier 7	0.00	351,123.87
Supplier 8	470,469.98	1,216,761.55
Supplier 9	0.00	270,224.98
Supplier 10	43,880.06	288,763.72
TOTAL	2,847,365.86	7,108,913.35

Source: Auditors' Analysis of Contracts and Fuel Delivery Records (2023)

Table 4.9 shows that, as of June 2023, USD 2,847,365.86 was the total outstanding balance, which shot up to USD 7,108,913.35 by 22 September 2023.

PBPA officials revealed that payment delays were attributed to reconciliation between suppliers and OMCs. It further stated that there is a limitation in enforcing OMCs to make timely payments. Clauses 18.10 and 18.11 of the contracts between PBPA and the suppliers require the suppliers to submit a report of demurrage charges by the respective purchasers within thirty (30) days from the date of issuing the invoice.

Furthermore, it was noted that PBPA has drafted the BPS Implementation Manual to ensure that OMCs settle their bills on time without affecting their reputation with suppliers. The revised manual intends to include provisions which give PBPA the mandate to collect claimable demurrage on behalf of the suppliers. Thus, if the defaulting OMCs fail to settle the claimable demurrage, the same will be collected by cashing the bank guarantee of the defaulting OMCs for the respective demurrage. Nonetheless, PBPA will continue to give the necessary support to all the suppliers who have outstanding demurrage claims until every debt is cleared.

4.3.5 Tempering of Seals During the Discharging of Petroleum Products

Para 18.4(j) of the Petroleum Bulk Procurement System Implementation Manual, 2020, states that if it is proven that the receiving terminal infrastructure or seals have been tempered to steal petroleum products during receipt, the respective terminal owner will be penalised according to the Petroleum Bulk Procurement Regulations in place. On such occasions, the highest figure between arrival and outturn will be used as receipt figures for that terminal.

Investigation Reports and the audit found that in 2 out of 6 investigations conducted where abnormal losses were detected, malpractices had occurred during the receipt of the petroleum products from vessels. The relevant details are in Table 4.10.

Table 4.10: Abnormal Loss Recorded and Key Observation During the Investigation

Investigation	Abnormal Loss in Cubic Metres (m ³)	Key issued observed
1	144.72	Seal 011681 placed at the valve to terminal XYZ pipeline was broken and not found.
2	379.00	Outlet and separation hummer blind seals were found not intact.
3	428.73	Outlet and separation hummer blind seals were found intact except for the line from KOJ; the Moil pump house valve was not sealed.
4	113.99	No defect detected
5	168.44	No defect detected
6	120.05	No defect detected
Total	1,354.93	

Source: Auditors' Analysis of the Investigation Report (2023)

Table 4.10 shows that two (2) terminals conducted malpractices when receiving petroleum products from delivered vessels. Furthermore, the audit found that:

Two oil terminals distorted BPS and were each penalised to pay USD 50,000. However, contrary to Petroleum (Bulk Procurement) Regulations GN. 198 of 2017, they were not suspended from participating in the bulk procurement system. Also, the team found that one Oil Terminal paid the penalty, and the other did not.

Furthermore, according to PBPA officials, PBPA has signed a contract with a supplier for the Petroleum Products Discharge and Back Loading Monitoring System - the system's supply, installation, testing and commissioning, which will facilitate the immediate detection of any losses received from vessels and the taking of appropriate action.

4.3.6 PBPA did not Report on the Performance of its Activities to EWURA and MoE on Monthly Basis

Regulation 5(o) of the Petroleum (Bulk Procurement) Regulations GN. 198 of 2017 requires PBPA to report monthly to the Ministry of Energy (MoE) and EWURA on its activities.

Upon review of the correspondence file between PBPA, the Ministry of Energy, and EWURA, the audit did not find monthly reports submitted to the Ministry of Energy and EWURA. PBPA's activities focused on forecasting and determining the demand and supply of petroleum products, collecting procurement requirements for petroleum products from OMCs, and conducting international competitive bidding for bulk petroleum products. These activities should be reported to MoE and EWURA every month as required.

PBPA responded that reports concerning stock levels, monthly tendering, demurrage costs, financial holding status, and other activities had been shared with the Ministry of Energy and EWURA on time to maintain stability within the bulk procurement system (BPS).

However, the audit found that the reports submitted to the Ministry of Energy were focused on special occasions, such as the implementation status of the supply and installation and commissioning of the Petroleum Products Discharge and Back Loading Monitoring System and not monthly reports based on the PBPA activities executed. This means that PBPA was not submitting its monthly performance reports to MoE as per the requirement of Regulation 5 (o) of the Petroleum Bulk Procurement Regulations, 2017.

CHAPTER FIVE

FINDINGS OF STOCK MONITORING AND REGULATING PETROLEUM INDUSTRY IN THE COUNTRY

5.1 Introduction

This chapter presents the findings on the system that ensures that the petroleum stock is adequately maintained to meet the minimum requirement and the reporting system of petroleum stock in the country. It also highlights the government's actions in managing the safety of the petroleum infrastructure and overseeing the performance of PBPA. The details of the observed situation in these aspects are presented hereunder:

5.2 Stock Monitoring of the Petroleum Products in the Country as Performed by EWURA

This section presents findings about stock monitoring and regulating the petroleum industry in the country. The audit noted the following:

5.2.1 EWURA did not Detect OMCs which Maintained not less than the Required 15 days stock of Petroleum Products at all Time

Regulation 6 of the Petroleum (General) Regulations GN. 163 of 2011 requires each wholesaler, at all times and depending on its market share for the previous year, to maintain physical, operational stocks in quantities sufficient for the consumption of not less than fifteen days. Additionally, Regulation 4 of the Petroleum (General) Regulations GN. 163 of 2011 requires EWURA to inform the Minister of the available petroleum stock weekly.

Given that the total number of OMCs with market shares for the calendar years 2020, 2021, 2022, and 2023 is 22, 22, 26, and 17, respectively, the audit managed to review and conduct an analysis of the 1st and 3rd weekly reports of each month of the calendar year spanning 2020 to 2023 which EWURA revealed. Not all OMCs maintained physical and operational stocks of not less than fifteen days, as shown in **Tables 5.1** and **5.2** for petrol and diesel, respectively.

Table 5.1: Status of OMCs Maintaining Physical Operational Stocks of Petrol Products of less than 15 Days

Months	Percentage (%) of the OMCs Maintaining Stock less than 15 days							
	2020		2021		2022		2023	
	1 st Week	3 rd Week	1 st Week	3 rd Week	1 st Week	3 rd Week	1 st Week	3 rd Week
January	45	36	-	64	12	31	-	47
February	32	32	-	36	35	23	53	65
March	32	32	36	36	27	31	-	47
April	32	32	32	-	35	31	53	59
May	-	18	50	36	19	-	-	59
June	18	-	41	27	23	35	-	47
July	55	-	32	36	31	23		
August	64	73	36	59	38	38		
September	55	-	-	41	-	50		
October	68	41	27	36	50	42		
November	-	41	36	-	62			
December	41	50	-	23	-	42		

Source: Auditors' Analysis of the Market Shares Concerning the Weekly Reports Related to the Stock Position

Key

- This means weekly reports were not available for the audit.

Table 5.1 shows that, for the first and third weekly reports available for audit, about 12% to 62% of OMCs were maintaining physical and operational stocks in quantities sufficient for the consumption of less than fifteen (15) days as per market share for petrol products.

The same situation is experienced in diesel products, as shown in Table 5.2,

Table 5.2: Status of OMCs who Maintained Physical Operational Stocks of Diesel Products for less than 15 days

Months	Percentage (%) of the OMCs maintaining Stock less than 15 days							
	2020		2021		2022		2023	
	1 st Week	3 rd Week	1 st Week	3 rd Week	1 st Week	3 rd Week	1 st Week	3 rd Week
January	36	27	-	45	35	35	-	47
February	18	14	-	45	35	35	47	41
March	27	27	41	36	38	31	-	35
April	23	18	32	-	31	35	59	59
May	-	23	18	23	46	-	-	41
June	23	-	23	24	54	42	-	65
July	55	-	36	50	35	62		
August	64	41	45	55	50	50		
September	55	-	-	50	-	35		
October	45	41	27	41	35	31		
November	-	41	59	-	31	-		
December	41	45	-	68	-	31		

Source: Auditors' Analysis of the Market Shares to the Weekly Reports related to the Stock Position

Key

- This means weekly reports are not available for the audit.

Table 5.2 shows that, for the first and third weekly reports available for audit, 14% to 65% of OMCs were maintaining physical, operational stocks in quantities sufficient for the consumption of less than fifteen days as per market share for diesel products.

The audit found that this situation was attributed to the following:

- a. EWURA does not assess the sufficiency of the maintained stock by considering petroleum stock physically maintained by each OMC as per market share. Instead, EWURA usually assesses the total fuel

available and reports to the Ministry of Energy, not the stock of each OMC, as it is required.

b. EWURA did not issue Reports of a Market Share of each OMCs for each product

Regulation 6 of the Petroleum (General) Regulations GN. 163 of 2011 requires each wholesaler, at all times and depending on its market share for the previous year, to maintain physical, operational stocks in quantities sufficient for the consumption of not less than fifteen days.

In a review of the market share reports determined by EWURA from the calendar year 2019-2022, the audit found that EWURA computed the overall market shares by considering the total petroleum data encompassing all products of the OMCs. This implies that EWURA did not account for each OMC's market share for specific petroleum products, such as diesel, petrol, kerosene, HFO, and JET A1.

EWURA, through a letter with ref.No.HA.141/273/01/Vol.II/15 dated 2 January 2024, highlighted that, when checking compliance, EWURA considers the market share of each product. However, no evidence has been submitted indicating that EWURA issues reports of the market share of each OMC per product.

This implies that EWURA did not prepare market share for each OMC for each petroleum product. As a result:

- (i) EWURA was unsuccessful in detecting OMCs that maintained fuel for less than required stock and, hence, reported to the Ministry of Energy on the overall fuel available in the country without indicating the status of each OMC per market share;
- (ii) It limits EWURA's ability to take appropriate action against OMCs who are unsuccessful in maintaining an operating stock of fuel sufficiently to meet the demand of 15 days as per market share;
- (iii) There is a likelihood of disruptions in the security of the supply of petroleum products for some retailers due to OMCs not having sufficient stock;
- (iv) In the event of a disruption in the supply chain of fuel, the country can suffer immediately because OMCs have not maintained physical stock as required, and

-
- (v) Inaccuracies in market shares compromised the ability to forecast petroleum stock required to be ordered by the OMCs, as stated in Section 4.2 of this Report.

5.2.2 EWURA Conducted Verifications of the Stock Positions for each OMCs in 10 out of the 22 Storage Depots

Regulation 10(1) of the Petroleum (General) Regulations of 2011 requires any EWURA's authorised officer to conduct an unscheduled inspection at any time. Additionally, para 1.18 (b) of the approved Functions and Organization Structure of EWURA (July 2020) require zonal offices to plan and conduct inspections in the zone, including quality of service monitoring, verification inspections, price monitoring, and regulatory directives compliance monitoring.

According to the review of the reports entitled "Dips Verification Exercise", auditors noted that EWURA successfully verified the stock position of OMCs' petroleum products in 10 out of the 22 depots. This is equivalent to 45% of the total depots.

In line with this assessment, the audit observed that among the depots visited by EWURA to assess stock positions, none had their stock position verified by EWURA on more than one occasion. However, auditors also pointed out that EWURA's verification of petroleum product stock positions appeared to be ad hoc. This was evident in the dip's verification exercise reports, which indicated that all planned work for verification occurred on the same date as EWURA's visits.

The root cause for the inadequate stock position verifications in the petroleum products depots was the absence of a well-structured verification plan with clear targets and key performance indicators. This deficiency led to an ad hoc approach, limited coverage, and insufficient data for the verification process. This may lead to shortages of petroleum products without the knowledge of the regulator (EWURA).

5.3 Ineffective Performance of the National Petroleum and Gas Information System (NPGIS)

Section 124(1) of the Petroleum Act, 2015 states that “there shall be a National Petroleum and Gas Information System (NPGIS), which EWURA shall maintain”.

Review of Contract No. AE/024/2018-19/HQ/C/39 shows that EWURA signed a contract with a consultant for the supply, installation, commissioning and testing of the National Petroleum and Gas Information System (NPGIS) in 2019 for TZS 480,673,800. The audit found the following anomalies:

(i) EWURA did not Manage to Integrate NPGIS to Capture the Stock Position of the Petroleum in an Electronic and Automated way

In a review of the National Petroleum and Gas Information System (NPGIS), auditors found that, although the system had been operational in a live environment and had been hosted at the National Data Centre since November 2021, it had not succeeded electronically and automatically capturing the stock positions of petroleum products. As a result, the existing NPGIS system could not collect real-time operational data from regulated entities in the petroleum industry as of this audit.

A review of the petroleum operations audit for the financial year 2022/23 revealed that this was attributed to a delay in identifying suitable operators' systems to facilitate the automatic data flow.

EWURA took two years to initiate efforts to potentially integrate NPGIS with operators' systems to enable automated data exchange. Another contributing factor was an excessive reliance on the manual logging of petroleum stock positions through the National Petroleum and Gas Information System (NPGIS). The inability to capture real-time stock positions of petroleum products means that EWURA lacked access to up-to-date operational data from regulated entities. This hampers its ability to make informed decisions, monitor the industry effectively, and respond promptly to anomalies or emergencies.

(ii) **EWURA did not enforce Oil Marketing Companies (OMCs) and Retailers (Petrol Stations) to log in the stock position of Petroleum products to NPGIS daily**

Rule 30 of Petroleum (Wholesale, Storage, Retail, and Consumer Installation Operations) Rules 2022 requires all licensees to disclose information to EWURA. EWURA launched the NPGIS, which requires OMCs of petroleum products to disclose stock information held daily through the Internet or short message services.

The review of the NPGIS system noted that not all OMCs and retailers logged their stock positions in the NPGIS. Those who submitted data on their petroleum products stock levels only did so partially and not daily, as required.

Auditors managed to analyse the OMCs who reported in the NPGIS. It was found that 26 out of 65 licensed wholesalers, equivalent to 40%, provided petroleum products stock level information partially daily, as required (see Table 5.3).

Table 5.3: Status of OMCs Logged in Petroleum Products Stock Levels in NPGIS

SN	Wholesaler Licence No	Number of the Reports in the NPGIS by Wholesalers		
		2021	2022	2023
1	PWL-2023-006	-	-	2
2	PWL-2022-032	-	-	5
3	PWL-2022-027	-	-	18
4	PWL-2022-023	-	-	13
5	PWL-2022-016	-	-	10
6	PWL-2022-009	-	-	13
7	PWL-2022-008	-	-	4
8	PWL-2022-006	-	10	18
9	PWL-2021-015	-	22	57
10	PWL-2021-004	-	7	5
11	PWL-2021-001	-	3	6
12	PWL-2020-009	-	-	13
13	PWL-2020-005	-	-	1
14	PWL-2020-001	3	-	-

SN	Wholesaler Licence No	Number of the Reports in the NPGIS by Wholesalers		
		2021	2022	2023
15	PWL-2019-005	-	136	-
16	PWL-2019-004	-	15	49
17	PWL-2019-003	10	27	17
18	PWL-2018-008	-	-	18
19	PWL-2018-006	-	-	3
20	PWL-2017-012	-	9	-
21	PWL-2017-011	-	-	4
22	PWL-2017-010	8	53	31
23	PWL-2017-003	-	5	-
24	PWL-2016-017	-	6	-
25	PWL-2016-006	-	1	-
26	PWL-2009-198	-	1	-

Source: Auditors' Analysis of the Data Logged in by the Wholesalers in the NPGIS

Table 5.3 shows that about 26 OMCs have logged data with NPGIS. This implies that the level of use of the system is not satisfactory. This limits EWURA's ability to have accurate data on end users' distribution and final reach.

(iii) 54% of the Retailers (Petrol Stations) submitted information on stock through the National Petroleum and Gas Information System for at least a day

Rule 30 of the Petroleum (Wholesale, Storage, Retail, and Consumer Installation Operations) Rules, 2022, requires all licensees to disclose information to EWURA. EWURA launched the NPGIS, which requires retailers of petroleum products to disclose daily stock information held through the Internet or short message services.

A review of the records found that 1223 out of 2260 (equivalent to 54%) submitted information to EWURA through NPGIS.

Interviews with EWURA officials revealed that the internet and frequent staff changes were the root causes of noncompliance at petrol stations. However, the audit revealed that non-enforcement was due to the persistent non-submission of data through NPGIS.

As a result,

- a) Non-uploading stock position data from OMCs to the NPGIS means that the system lacks comprehensive information about the petroleum products in the market. This can hinder effective monitoring, analysis, and decision-making related to the petroleum industry through the system and
- b) Relying on weekly emailed data from OMCs introduces a potential delay in obtaining accurate and up-to-date information. This can affect EWURA's ability to respond to market dynamics promptly, address supply and demand issues, and ensure the smooth functioning of the petroleum sector.

(iv) Inadequate integration of NPGIS with key Government Institutions

Appendix 2(v) of the contract no. AE/024/2018-19/HQ/C39 between EWURA and Consultant highlighted that the NPGIS installation was intended to establish connections with multiple institutions, including EWURA, PURA, Ministry of Energy, Ministry of Finance and Planning, NBS, and a minimum of five (5) crucial government organisations.

A review of the NPGIS system audit found that up to the time of this audit, NPGIS did not link with other systems. This shortcoming resulted in the system's inability to enhance data and information accessibility, which is necessary for monitoring, planning, development, and decision-making purposes.

5.4 EWURA Inadequately Enforced Protection of the Petroleum Infrastructures Against Potential Leaks

Paragraph 4.3 of the installation of underground storage tanks, pumps/dispensers, and pipework at service stations and consumer installations (First Edition 2009) states that when cathodic protection of the tank and pipe work is needed, it shall be provided per relevant standards. Additional paragraph 7 of this document requires piping for tanks other than fibre-reinforced resin tanks that may be of steel black piping, protected against corrosion by a petrolatum gauze wrapping, with a PVC outer wrap, or of a suitable non-metallic material.

In contrast, guideline 10.1(c) of the 2009 Depot Guidelines specified that above-ground piping required paint or epoxy protection against external corrosion, while underground systems needed protective coatings or cathodic protection. Also, guideline 5.1.4.1.1 of the Retail Outlet Guidelines requires that any tank or piping in contact with soil should have a guaranteed cathodic protection system engineered, installed, and maintained properly.

Furthermore, based on the National Association of Corrosion Engineers (NACE), Standard RP0285-2002 Item No. 21030, it is recommended to use a cathode protection (CP) system to protect the external parts of steel that are immersed in water or buried.

The audit acknowledges and appreciates EWURA's proactive efforts in assessing the integrity of petroleum infrastructure. This recognition is based on a thorough review of the reports titled "EWURA Integrity Assessment of Receiving Facilities at Dar es Salaam, Mtwara, and Tanga," dated 18 August 2017.

However, according to the report, one of the findings was the occurrence of containment losses due to leaks attributed to corrosion. Specifically, external corrosion emerged as the most probable cause, as the pipelines lack a cathodic protection system. Additionally, it was observed that the bottom plates of the majority of the depot tanks were not connected to a corrosion protection system, leaving them vulnerable to corrosion.

On the other hand, auditors noted a noticeable absence of substantial evidence indicating that petroleum retailer operators complied with the provided standards and specifications, especially regarding the protection of petroleum storage facilities. This encompassed many facilities, including petroleum storage tanks, pipelines, and various steel equipment.

Furthermore, auditors also noted that EWURA lacked a comprehensive database depicting the protection status of petroleum storage facilities. As a result of this finding, auditors noted that the primary responsibility for implementing protective measures for these critical facilities seemed to rest solely in the hands of petroleum operators. This granted them full authority to determine whether or not to install these crucial protective systems.

The following are the factors that contributed to EWURA not ensuring the protection of the petroleum storage facilities:

(i) EWURA did not Monitor Petroleum Operators to enhance their compliance with Infrastructure Installation Standards and Specifications

During the review of pre-licencing inspection reports, evaluation reports for storage licence applications, and licence renewal applications, it was observed that EWURA had not monitored whether petroleum operators aligned their infrastructure installations with the prescribed standards and specifications. This non-alignment contradicts the mandate outlined in Para 1.8.2(v) of the approved Functions and Organisation Structure of the EWURA (July 2020), which requires EWURA to collaborate with the Tanzania Bureau of Standards (TBS) to develop or adopt technical standards and specifications for petroleum products.

Furthermore, this lack of alignment contradicts the commitment expressed by EWURA on its official website, which states that the Authority (EWURA) ensures that petroleum products and infrastructure adhere to established standards and specifications. The website insisted that once these standards are approved, EWURA ensures that petroleum operators adhere to them.

(ii) Overreliance on the EWURA's Rules

Based on the review of pre-licencing and evaluation reports for storage licence applications and licence renewals, auditors noted that EWURA's enforcement efforts were primarily concentrated on the established rules, especially those related to the requirement for obtaining licences related to petroleum storage, consumer installations, petroleum pipeline operations, petroleum retail construction, and petroleum storage.

This means that the information presented in the pre-licencing and evaluation reports primarily relates to compliance with existing rules and regulations. However, there was a notable absence of reports on EWURA's compliance with TBS's standards and specifications and other industry best practices.

The following are the implications of the EWURA not ensuring the protection of the petroleum storage facilities as per standards:

- a) ***Corrosion weakens the structural integrity of facilities***, potentially leading to leaks, spills, and accidents. This puts people's safety at risk and can harm the environment. Refer to the photo below depicting the condition of corrosion in the above-ground infrastructures.; and



Photo 1: Shows the corrosion status of the pipelines at KOJ Manifold as of 4th October, 2023



Photo 2: Shows corrosion status of the Diesel pipeline from KOJ to PUMA/GAPCO manifold²

- b) ***Corrosion-related leaks can result in the release of harmful chemicals into the environment, causing pollution and ecological damage***

EWURA did not ensure petroleum operators adhere to infrastructure installation standards and specifications, including installation of underground storage tanks, pumps/dispensers, and pipework at service stations and consumer installations (First Edition 2009), Depot Guidelines of 2009, Retail Outlet Guidelines, and international best practice namely National Association of Corrosion Engineers (NACE), Standard RP0285-2002 Item No. 21030. The absence of enforcement allowed operators to decide

² EWURA Integrity Assessment of receiving Facilities at Dar es Salaam, Mtwara and Tanga, Study Document Number: 16011-EN-RPT-004, 18 August 2017

whether or not to implement crucial protective measures during installations.

5.5 Oversee the Implementation of the Petroleum Bulk Procurement System

This section presents findings about overseeing the implementation of the PBPA as presented hereunder:

5.5.1 EWURA did not Oversee the Activities Conducted by PBPA

Regulation 14(5) of the Petroleum (Bulk Procurement) Regulations of 2017 required EWURA to oversee all matters related to the supply of petroleum products in the country. On the other hand, a review of the approved EWURA annual action plan spanning 2020/21 to 2022/23 requires assessing compliance with the implementation of the bulk procurement system through a technical review meeting that assesses the performance of the bulk procurement system (BPS).

A review of the correspondence files between EWURA and the PBPA found that EWURA had not effectively overseen the PBPA's activities. This deficiency is substantiated by the PBPA's shortcomings in inadequately fulfilling their assigned duties, as Chapter 4 of this Report outlines.

Also, the audit found that, from the financial year 2020/21 to 2022/23, EWURA only conducted 2 out of 4 scheduled technical review meetings to evaluate the performance of the bulk procurement system (BPS). This was confirmed by the availability of Bulk Procurement System (BPS) Performance Evaluation Reports, as indicated in **Table 5.4**.

Table 5.4: Status of the Technical Review Meeting to Assess the Performance of the BPS

Financial Year	Activities Planned	Planned Deliverables	Actual Deliverables
2020/21	To conduct a Technical Review meeting to evaluate the performance of the BPS	1	0
2021/22	To conduct a Technical Review meeting to evaluate the performance of the BPS	1	1
2022/23	To conduct a Technical Review meeting to evaluate the performance of the BPS	2	1

Source: Review of the Annual Plans from 2020/21 to 2022/23 and BPS Performance Evaluation Reports from 2021 and those from April 2022 to March 2023

Table 5.4 shows that no actual deliverables were reported in the financial year 2020/21. In the subsequent financial year (2021/22), one meeting was both planned and successfully conducted. Also, two meetings were planned in the financial year 2022/23, but only one was conducted.

Furthermore, the audit acknowledged the presence of the two BPS Performance Evaluation Reports from 2021 and those from April 2022 to March 2023; however, it was found that no evidence showed that EWURA issued feedback or recommendations to PBPA related to the performance of the BPS. However, upon reviewing the correspondence files between EWURA and PBPA, auditors acknowledge that EWURA consistently sent letters to PBPA addressing various challenges it had identified, especially those related to the petroleum delivery dates.

Upon reviewing the Bulk Procurement System (BPS) Performance Evaluation Reports from 2021 and those from April 2022 to March 2023, auditors found that one of the contributing factors was EWURA's inadequacy in conducting a comprehensive review of the entire Bulk Procurement System (BPS) processes. This encompassed critical stages such as the registration of OMCs, the negotiation and signing of shipping and supply contracts, the execution of shipping and supply operations, and the creation of contractual performance reports.

This contributed to the lack of a detailed plan that shows targets and key performance indicators (KPIs) for evaluating the performance of the Bulk Procurement System (BPS). As a result, EWURA lacked a comprehensive understanding of the challenges faced by the Petroleum Bulk Procurement Authority (PBPA).



CHAPTER SIX

FINDINGS OF THE PETROLEUM STRATEGIC RESERVE, RECEIVING AND STORAGE INFRASTRUCTURE

6.1 Introduction

This chapter presents audit findings regarding the Petroleum Strategic Reserve and Receiving and Storage Infrastructures, which ensure the security of the supply of petroleum products in the country.

6.2 Strategic Petroleum Reserve, Receiving and Storage Infrastructures

This section presents findings regarding the petroleum strategic reserve, receiving, and storage infrastructures as shown hereunder:

6.2.1 TPDC did not Establish a Strategic Petroleum Reserve for Nine Years

Regulation 6(1)(2) of the National Strategic Petroleum Reserve Regulations, 2014, states that “the Strategic Petroleum Reserve (SPR) shall be maintained in storage facilities owned or rented by TPDC”. Also, the TPDC is obliged to install, control, monitor, and supervise the smooth operation of the National Strategic Petroleum Reserve (NSPR).

By reviewing the TPDC's Annual Performance Reports spanning from 2019/2020-2022/2023, the audit found that, for approximately nine years up to November 2023, the time of this audit, TPDC had not fulfilled its obligation to establish the strategic petroleum reserves. This has impeded the achievement of the objectives outlined in the National Strategic Petroleum Reserve Regulations of 2014, which include the following goals:

- (i). To provide reserves of petroleum products in physical stock in selected localities in the country;
- (ii). Ensure continuity of supply all the time, in normal conditions and in case of national or international petroleum supply chain disruption or shortage of petroleum products;

- (iii). Responding to incidents such as natural disasters or other interruptions of petroleum distributions in the country; and
- (iv). Stabilise the domestic oil price.

However, reviewing the reports entitled “The Plots for Fuel Storage”, the audit found that TPDC owned eight (8) plots purposely to establish the fuel storage (depots). **Table 6.1** presents the status of the plots owned by the TPDC.

Table 6. 1 : List TPDC’s Plots for Establishment of Petrol Depots and Stations and their Ownership Status

S/N	Plot No.	Current Use	Status of the Ownership/Availability of the Title Deeds
1	Plot No. 79, Block A, Kibirizi, Kigoma	Petrol depot-undeveloped	Title deed available
2	Plot No. 64, Block B, Uyole, Mbeya	Petrol depot-undeveloped	Title deed available
3	Plot No. 1-8, Block G, Mpanda, Katavi	Petrol depot - undeveloped	Title deed available
4	Plot No. 11/12, Block A, Isaka, Kahama	Petrol depot-undeveloped	Title deed available
5	Plot No. 2006 Block ‘E’, Bitumen Plant, Kigamboni	Petrol depot-undeveloped	Title deed available
6	Zuzu Dodoma	Petrol depot-undeveloped	Title deed under preparation
7	Chongoleani Tanga	Petrol depot-undeveloped	Title deed under preparation
8	Plot No. 50 and 51, Industrial Area, Makambako	Petrol depot-undeveloped	Title deed available

Source: Analysis of TPDC Reports and Title Deeds, 2023

Table 6.1 details that TPDC had title deeds for 6 out of 8 plots, and 2 title deeds were under preparation.

Also, a review of the previous TPDC’s Strategic Plan, the current Strategic Plan and Annual Plans suggests that the TPDC has not implemented a Strategic Petroleum Reserve (SPR) due to the following reasons:

-
- (i) Delay in including the implementation of Strategic Petroleum Reserve in its Strategic Plan. TPDC did not include issues of SPR in the Strategic Plan 2014/15 to 2017/18 while including SPR in 2018/19 to 2022/23. This means that since the Strategic Petroleum Reserve Regulations were issued early in 2014, it took about four years to include the issue of Strategic Petroleum Reserve in the TPDC Strategic Plan of 2018/19 to 2022/23;
 - (ii) The absence of an implementation plan for maintaining the National Strategic Petroleum Reserve is a significant factor that hindered TPDC's ability to fulfil its obligations. While having a strategic plan is a crucial first step, it must adhere to a well-defined and detailed strategy for execution to ensure that goals are met and
 - (iii) TPDC's Strategic Plan of 2018/19 to 2022/23 outlined the need to develop storage infrastructure facilities, regional depots, pipelines, and petrol stations in strategic areas. The development of these facilities was not a significant reason for the SPR not being maintained.

The absence of a Strategic Petroleum Reserve (SPR) as mandated by regulations can affect the security of the supply of petroleum in the country. In emergencies such as natural disasters, geopolitical conflicts, or disruptions in the petroleum supply chain, insufficient reserves can leave the country vulnerable to fuel shortages, potentially impacting critical sectors like transportation, healthcare, and emergency response.

Furthermore, TPDC responded that operating SPR through renting storage facilities is costly and may not lower or stabilise domestic oil prices since storage charges will lead to higher oil prices per regulation 10(4) of the National Strategic Petroleum Reserve Regulations of 2014 that requires the price to the final consumer to be a weighted average of SPR and BPS. Therefore, TPDC has a plan to rehabilitate and construct new tanks that will be used in SPR and as receiving terminals for TPDC's consignment, as follows:

In the financial year 2023/24, TPDC has planned to rehabilitate tank No. 8, located within TIPER premises. TPDC and TIPER are working closely to develop a roadmap to ensure the tank's smooth rehabilitation. The

rehabilitation will take approximately one (1) year to complete after concluding ongoing discussions between TPDC and TIPER.

Also, TPDC owns a plot at Kigamboni adjacent to TIPER (formerly used as a bitumen loading bay) to develop a storage depot. The procurement of the consultant to undertake the Environment Impact Assessment (EIA) study is ongoing, and the consultant is expected to be secured by February 2024. The storage depot construction has been planned to be implemented in two (2) phases and will take approximately three (3) years to complete.

Furthermore, in the financial year 2024/25, TPDC plans to conduct a feasibility study covering its strategic plots upcountry. The study aims to identify the viability of each plot and prioritise its development accordingly. The study will also highlight the roadmap towards implementation of the SPR.

In addition, TPDC is currently revising its strategic plan to narrate in detail the model of SPR to be implemented, including issues such as the infrastructure required and the operation philosophy to be adopted.

6.2.2 Limited Capacity of the Receiving Infrastructures

Review of EWURA's Integrity Assessment of Receiving Facilities at Dar es Salaam, Mtwara, and Tanga Study, Document Number: 16011-EN-RPT-004, dated 18 August 2017, found that there was one pipeline from the Jetty bringing in multiple products (petrol and diesel) to tank farms (GM and OILCOM Mtwara terminal tanks). Consequently, when multiple products are received, the line is flushed with air to clean the line before the next product is received.

The audit discussed this matter with officials from visited depots. It indicated that using a single pipeline for petrol and diesel poses a potential risk of contamination of the petrol and diesel products. The potential consequences of such contamination include compromised fuel quality, which may lead to engine malfunctions and equipment damage and pose safety risks for vehicle operators and end-users.

Upon reviewing the letter dated 31 October 2022 with reference number PBPA/MOE/730/2022, which PBPA sent to the Ministry of Energy, it was

noted that the existing infrastructure for receiving petroleum products has limited capacity. The review revealed that these facilities had operated since 2012, when the monthly import volumes ranged between 200,000 and 250,000 metric tons.

However, the same infrastructure is currently receiving 650,000 metric tons. As a result, vessels are experiencing extended waiting times before unloading their cargo. This was due to the limited capacity of the infrastructures to receive volume discharge at berthing facilities.

Since vessels stay too long, they pose supply risks, leading to increased demurrage and, subsequently, higher import premiums. Significantly, auditors have not encountered any correspondence or observed any initiatives from the Ministry to address the challenges of the existing infrastructure.

However, in a review of EWURA’s Petroleum Subsector Performance Review Reports for the mid-and downstream for years 2020 and 2021, the audit found that the operation of SBM regarding infrastructures was more efficient as compared to KOJ1 operations.

The audit noted the limited capacity of infrastructures at the Ports Receiving Facility, which was attributed to the inefficient operation of KOJ. A review of EWURA’s petroleum subsector performance review reports for the mid-and downstream calendar year 2022 showed a limited capacity of KOJ's pipes. This meant that KOJ could not effectively accommodate vessels with larger capacities than SBM. A breakdown of the capacity limitations of Dar es Salaam's berthing facilities is detailed in Table 6.1.

Table 6.2: Capacity of Facilities at the Port’s Receiving Facilities in Tanzania

Berthing Facility	Maximum Safety Operating Capacity (DWT ³)	Products that can be received through that facility
Single Buoy Mooring (SBM)	150,000	Diesel &Crude Oil
Kurasini Oil Jetty 1 (KOJ1)	45,000	Petrol, Heavy Fuel Oil (HFO), Kerosene, Jet A-1 and Diesel

³ Dead Weight Tonnage

Berthing Facility	Maximum Safety Operating Capacity (DWT ³)	Products that can be received through that facility
Kurasini Oil Jetty 2 (KOJ2)	5000	LPG and Back loading of Petrol, Diesel, Kerosene and Jet A-1 to Zanzibar
Tanga	40,000	Diesel, Petrol and Kerosene
Mtwara	38,000	Diesel & Petrol

Source: EWURA's petroleum sub-sector Performance Review report of the mid and downstream of the calendar year 2022

To address the limited capacity of receiving infrastructures, the Ministry of Energy stated that TPA, responsible for constructing and improving receiving infrastructures in the port area, has addressed these challenges. The Ministry also indicated that several meetings have been conducted between the Ministry of Energy and the Ministry of Transport regarding the challenges raised. To expedite this obligation, the Ministry of Transport and TPA have arranged monthly meetings to discuss the improvement of port infrastructure, and the Ministry of Energy has been attending the meetings. Nevertheless, the Ministry of Energy has not indicated the progress made in addressing this challenge.

- (i) **Vessel interruptions and priority challenges:** During the interviews with PBPA officials, it was revealed that difficulties were associated with prioritising berthing requests. Priority berthing relates to backloading fuel to Zanzibar, handling transit fuel requirements, and occasionally determining the priority of vessels, especially those carrying cooking oil. These interruptions may lead to delays in vessel operations, impacting the supply chain and potentially causing economic disruptions.

In response to the noted challenges, the Ministry of Energy (MoE) stated that priority berthing is allowable per the Petroleum Bulk Procurement Regulations. MoE stated further that it is the responsibility of PBPA and TPA to make proper arrangements to ensure that it does not impact the security of supply.

Notwithstanding the above remarks, the audit found that Regulation 16(1) of the Petroleum (Bulk Procurement) Regulations of 2017 requires non-bulk procurement system (BPS) vessels not to be given priority

unless approved by the Minister of Energy. This implies that this obligation is not for TPA and PBPA only.

- (ii) **Less prioritisation of the single buoyance mooring being optional for the receiving of the white petroleum products (petrol):** Based on the vessel arrangement reports, auditors noted that, until the time of this audit, white petroleum products (petrol) were not discharged at the Single Buoy Mooring (SBM). This was due to the lack of a pipeline to transfer white products from SBM to TIPER or other depots.

The absence of a dedicated pipeline limits the operational flexibility of the port, making it challenging to handle white petroleum products like petrol. This can also lead to delays and increased operational costs. In response, the Ministry of Energy stated that TPA is mandated to manage the expansion of receiving infrastructure in the ports. However, Part 3.2 (vi) of the Approved Organisation Functions and Structure of the Ministry of Energy requires the Ministry to coordinate the development of petroleum infrastructure for the security of supply.

This implies that as a sectoral Ministry, the Ministry of Energy is required to coordinate with the implementing entities to maintain a petroleum infrastructure that ensures the security of the petroleum supply in the country.

6.2.3 Absence of Single Receiving Terminal of Multi - petroleum Products

Para 17 of the Petroleum Bulk Procurement System Implementation Manual, 2020 states that, for Single Receiving Operations, all petroleum products procured through the Bulk Procurement System shall be discharged into a Single Receiving Terminal (SRT) and, after that, distributed to the OMCs nominated terminals.

A review of the mid-and downstream petroleum subsector performance review reports for 2020 and 2021 shows that one of the challenges was the lack of a single receiving terminal for white petroleum products, which will ensure products are received within a short period and hence reduce demurrage costs. Also, a review of the Minister of Energy's budget speech for the financial year 2023-2024 shows that no adequate infrastructure was

specifically designed to support a single receiving point for petroleum products, particularly diesel and petrol. During the transitional phase of infrastructure investment, TIPER infrastructures were used as a single receiving terminal (SRT) for receiving diesel products only.

However, this arrangement falls short of meeting the demand, as two (2) to four (4) diesel fuel ships enter each month. At the same time, the current capacity at TIPPER allows for the storage of only 253.65 million litres. On the other hand, based on the review of the correspondence files between EWURA and PBPA, it was noted that, due to financial holds, TIPER suffers from ullages for receiving petroleum products. However, based on the written comments from the Ministry of Energy related to the financial hold, it was noted that the Ministry held the view that the main problem with the financial hold is the scarcity of USD. The Ministry of Energy has liaised with the Ministry of Finance to find an amicable solution regarding the scarcity of USD.

Nevertheless, the Minister of Energy's budget speech for the financial year 2023/24 noted that the lack of a proper single receiving terminal was attributed to inadequate infrastructure. This was partly attributed to financial constraints, an absence of a petroleum master plan, and an implementation strategy within the Ministry of Energy, as presented in Chapter 7 of this report. This leads to insufficient attention and investment in establishing the necessary infrastructure.

The following are the implications of not having a single receiving point for petroleum products:

- (i). Demurrage charges are incurred for the extra time a ship spends at the port beyond the agreed-upon timeframe during the discharging of the products, as detailed in section 4.3.3 above. These charges significantly increase the overall purchase price for customers and
- (ii). Delays in offloading petroleum products can disrupt the planned supply chain and distribution schedule. This can lead to shortages or delays in delivering petroleum products to end consumers or businesses relying on them.

The audit review of the acceptance letter of award from TPA to the Joint venture of M/s China Railway Major Bridge Engineering and M/s WUHUAN

Engineering with ref. MB. 108/431/12/106 dated 29 November 2023 found that the government, through the Tanzania Port Authority (TPA), has awarded a contract for the construction of a Single Receiving Terminal. The project timeline is for a period of 24 months, and once completed, it will alleviate the problem associated with the delay in discharge.

6.2.4 Storage Facilities Upcountry were not Operational

A review of the Mid and Downstream Petroleum Subsector Performance Review Report 2022 shows that the country has a storage capacity of 1,484,870 cubic meters. This means that 1,409,244 out of 1,484,870 M³ (equivalent to 95%) of the storage capacity is at the receiving terminal, and 75,626 M³ (equivalent to 5%) is at the upcountry.

Moreover, the Mid and Downstream Petroleum Subsector Performance Review Report 2022 shows that most of the storage facilities upcountry were not operational, avoiding the cost of double loading and offloading.

In addition, the audit found that as of 31 December 2022, 21 out of 23 receiving terminals were operational, having a total capacity of 1,343,115 cubic metres.



CHAPTER SEVEN

FINDINGS ON COORDINATION AND EFFICIENCY OF THE PERFORMANCE MEASUREMENT FOR EWURA, TPDC AND PBPA BY MINISTRY OF ENERGY

7.1 Introduction

This chapter presents findings regarding preparing plans, reporting, coordination, and performance measurement of EWURA, TPDC, and PBPA as carried out by the Ministry of Energy. In particular, the chapter covers findings related to coordination for management of the importation of petroleum products and performance measurement for entities responsible for ensuring the security of the supply of petroleum products in the country. Audit findings on each of these aspects are presented here.

7.2 Coordination for Management of the Importation of Petroleum in the Country

This section presents findings on the tools developed by the Ministry of Energy that facilitate the coordination role to ensure the security of the supply of petroleum products in the country.

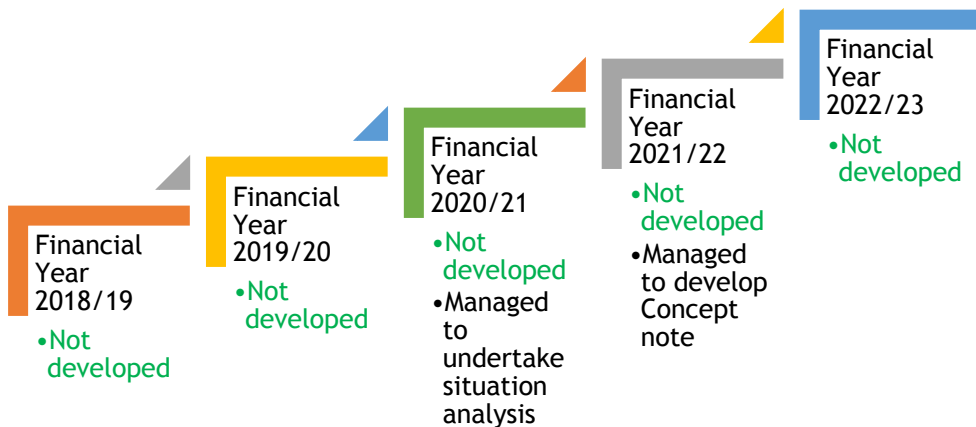
7.2.1 The Ministry of Energy did not Develop the Petroleum Infrastructure Development Master Plan (PIDMP)

A review of the Ministry of Energy's Performance Reports for 2018/19-2022/23 shows that for five years, the Ministry of Energy did not develop the Petroleum Infrastructure Development Master Plan (PIDMP). This contradicts the requirement of the Strategic Plan 2018/19 - 2020/21, where the Ministry targeted developing the Petroleum Infrastructure Master Plan (PIDMP) by 2021. Nevertheless, the review of the Ministry of Energy's Annual Performance Report, 2021/22, shows that the Ministry of Energy managed to develop the concept note for developing the PIDMP.

Similarly, a review of the Ministry of Energy's Strategic Plan, 2021/22-2025/26, shows that the Ministry of Energy re-planned to develop PIDMP by 2026. Up to November 2023, the time of this audit, the Ministry has managed to conduct situational analysis for depots located upcountry, Dar es Salaam and Lake zone. The Ministry also developed the concept note in 2021/22.

The implementation of the Ministry's targets for the development of PIDMP is chronologically shown in **Figure 7.1**:

Figure 7.1: Chronological Efforts for the Development of PIDMP



Source: Auditors' Analysis of Plan vs Actual Implementation (2023)

Figure 7.1 shows that, from 2018/19 to 2020/21, the Ministry of Energy did nothing regarding preparing the Petroleum Infrastructure Master Plan until 2021/22, when the concept note was developed. This is despite the fact that the target aimed to enhance sustainability and efficient petroleum supply and utilisation. The Master Plan was also key to coordinating and managing petroleum stock in the country.

During the interviews with officials from MoE, it was revealed that the Ministry was searching for a financier to finance the preparation of the Petroleum Infrastructure Master Plan. On the other hand, the audit found that the non-prioritisation of the preparation of the PIDMP plan was due to the non-preparation of the Petroleum Infrastructure Development Master Plan until September 2023.

The absence of a prepared/developed and implemented Petroleum Infrastructure Development Master Plan (PIDMP):

- a. Hinders the Ministry of Energy from performing its functions of coordinating the development of petroleum infrastructure for the security of supply due to a lack of detailed information on the current status and the road map for installing petroleum-related

infrastructures such as berthing, receiving, distribution, transmission and storage infrastructures;

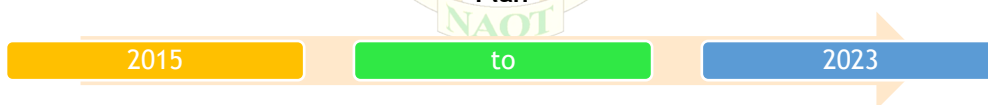
- b. Leads to a possibility of having duplication of government initiatives, efforts, and plans to be undertaken by various actors due to a lack of clarity of responsibilities among the key responsible actors; and
- c. Creates uncertainty for investors, industry stakeholders, and potential business partners due to the absence of a clear and well-defined master plan.

7.2.2 Absence of National Petroleum Emergency Supply Plan for About Eight (8) Years

Section 5(1) (k) of the Petroleum Act, 2015 requires the Ministry of Energy (MoE) to prepare a National Petroleum Emergency Supply Plan.

A review of the relevant documents at MoE showed that the Ministry did not develop the National Petroleum Emergency Supply Plan from 2015 to 2023 (about eight (8) years), as shown in **Figure 7.2**.

Figure 7.2: Demonstration of Duration taken without Petroleum Emergency Plan



Source: Auditors' Analysis for Preparation of Petroleum Emergency plan through Progress reports

Figure 7.2 shows that the MoE spent eight years without having a petroleum emergency plan. In response, the Ministry stated that the issues of the Petroleum Emergency Plan are elaborated in the Petroleum Act, 2015 and the Petroleum (General) Regulations, 2011, which state what to do in an emergency.

However, the audit found that section 181 (1) of the Petroleum Act, 2015 requires the MoE to develop the Petroleum Emergency Plan to respond to accidents, natural disasters or other interruptions or distortions of the petroleum product supply. In so doing, the Ministry is required to prepare the Plan or cause in close cooperation with other competent Government authorities and the participants in the supply chain.

The audit found that the non-prioritisation was attributed to the lack of the Petroleum Emergency Supply Plan.

7.3 Performance Measurement for Agencies responsible for Ensuring the Security of the Supply of Petroleum

As a means of fulfilling its function for overseeing the security of the supply of petroleum products in the country as required by Para 3.2 of its Approved Organisation Functions and Structure, the Ministry of Energy is required to assess if its Agencies (EWURA, TPDC, and PBPA) perform their obligations as required. The audits found the following:

7.3.1 Ministry of Energy did not Measure the Performance of EWURA, TPDC and PBPA in Managing the Importation of Petroleum Products

Para 3.2 of the Approved Organisation Functions and Structure of the Ministry of Energy requires the Ministry to oversee the security of the supply of petroleum products in the country. For this case, MoE was expected to develop Key Performance Indicators (KPIs), Plan for undertaking performance measurement and performance measures, and provide feedback on areas for improvement.

A review of the correspondence file between the Ministry of Energy (MoE) with EWURA, TPDC and PBPA at MoE shows that the Ministry did not have a report which indicates that MoE measured the performance of the activities assigned to EWURA, TPDC and PBPA related to the importation of petroleum to ensure effectiveness and efficiency in the security of the petroleum in the country.

This was attributed to the lack of a plan for measuring the performance measurement of PBPA, EWURA and TPDC. During the review of the Ministry of Energy's strategic plans for 2021/22-2025/26, the audit noted that the Ministry of Energy did not plan to undertake performance measurement of the activities implemented by PBPA, EWURA, and TPDC.

Shortfalls in undertaking performance measurement of EWURA, TPDC and PBPA resulted in the unsatisfactory performance of these entities, as presented in Chapters 4, 5 and 6 of this report. In response, the Ministry

stated that it is planning to Develop Key Performance Indicators (KPIs) and a plan for undertaking performance measurement that would guide the measurement of the performance of its institutions.

7.3.2 Ministry of Energy Analyzed 3 out of 156 Stock Position Weekly Reports from EWURA

The audit found that EWURA submitted weekly reports to MoE indicating the status of petroleum. However, the evidence submitted by MoE indicated that it managed to analyse 3 out of 156 stock position weekly reports submitted by EWURA during the audit period. This is equivalent to 2% of the submitted reports. Also, no feedback from MoE was submitted to EWURA based on the reports submitted.

Interviews with officials from MoE suggested that there was no need for the Ministry to analyse the data and information of the submitted Weekly Reports by EWURA, especially when the reported petroleum stock was sufficient. Further, when asked about the weekly report submitted by EWURA, which does not indicate the stock of each OMC as per his market share, the interviewed officials claimed that they did not see any shortfall in the reports submitted.

Despite the responses from MoE, the audit noted the report submitted by EWURA only presents the total fuel available in the country. The reports did not show whether the fuel maintained by each OMC meets the demand of 15 days as per its market share. As a result, the Ministry was not aware of the extent to which OMCs complied with the requirement for maintaining minimum stock levels, as presented in **Section 5.2** of this Report.

This poses the risk of the Ministry not taking appropriate actions and decisions due to limited information submitted to the Ministry.

Further, the audit found that reporting fuel stock in total is contrary to the requirement of Regulation 6 of the Petroleum (General) Regulations of 2011 and carries the risk of fuel shortages for some OMCs, which would ultimately affect some retailers. In addition, the Ministry may not have access to accurate and up-to-date information regarding supply and demand trends. This can hinder their ability to make informed decisions about energy

policies, pricing, import/export strategies, and ensuring a stable and reliable energy supply.

Moreover, the Ministry of Energy may face challenges in identifying potential shortages or excesses in petroleum stock and accurately tracking stock trends.

Thus, it becomes difficult for the Ministry to proactively address supply shortages or manage excesses, leading to potential disruptions in the market and creating imbalances between supply and demand.

7.3.3 Ministry of Energy did not ensure that TPDC developed a Strategic Petroleum Reserve for about Nine Years

Section 5(1)(k) of the Petroleum Act, 2015 requires the Ministry of Energy to ensure sufficient strategic reserves of petroleum and petroleum products as the market requires.

A review of the relevant documents at MoE shows that the Ministry has not ensured that TPDC develop strategic reserves to ensure the security of petroleum supply in the country, as stated in **Section 6.2.1** of this Report. In response, the Ministry stated that TPDC is currently undertaking initiatives to ensure the strategic petroleum reserve (SPR) is established by starting with the rehabilitation of Tank No.8 located at TIPER premises.

The Ministry had also responded that, through TPDC, it has undertaken various initiatives to ensure that the SPR is established. These initiatives include the rehabilitation of Tank No. 8 located at TIPER premises and the construction of Depot Tanks at Kigamboni adjacent to TIPER.

Also, the ministry revealed that operating SPR through renting storage facilities is costly and may not lower or stabilise domestic oil prices since storage charges will lead to higher oil prices. Regulation 10(4) of the National Strategic Petroleum Reserve Regulations of 2014 requires the price to the final consumer to be a weighted average of SPR and BPS.

Among other measures taken by the government to maintain security of supply in the country as part of the Strategic Petroleum Reserve requires OMCs to maintain a stock of 15 days for domestic use.

In addition, they revealed that the current SPR model is not user-friendly in terms of capital and operation, based on the Tanzanian market and environment. To resolve the above challenges, TPDC is revising its long-term strategic plan. The preliminary assessment recommends different models suitable for the operation of SPR. TPDC will adopt either of the suggested models based on market interest and the Tanzanian environment as specified in the study.

Moreover, TPDC plans to hire a consultant in the financial year 2024/25 to conduct project engineering design, a detailed feasibility study for setting up SPR, and a business model to be used. This plan will narrate in detail the model of SPR to be implemented, i.e., the infrastructure required and the operation philosophy to be adopted, considering financial muscles, the Tanzanian market, and the environment in the implementation and operation of SPR.

7.3.4 The Ministry of Energy did not enforce PBPA to Report its activities Monthly

Regulation 5(o) of the Petroleum (Bulk Procurement) Regulations GN. 198 of 2017 requires the Petroleum Bulk Procurement Agency to report its activities to the Ministry of Energy and the Energy and Water Utilities Regulatory Authority every month.

Reviewing the correspondence file between PBPA and MoE, the audit did not find monthly reports submitted to MoE and EWURA. The agency's activities focus on forecasting and determining the demand and supply of petroleum products, collecting procurement requirements from OMCs, and conducting international competitive bidding for bulk petroleum products.

The reports on these activities were not submitted on a monthly basis as required; instead, the Audit found that PBPA submitted its report to MoE on special occasions, like the implementation status of the supply as well as the installation and commissioning of the Petroleum Products Discharge and Back Loading Monitoring System. As a result, the Ministry was unaware of the shortfalls associated with BPS and other relevant information, as detailed in **Chapter 4** of this Report.

7.3.5 Lack of a Web-Based System for Stock Monitoring of Petroleum Products at the Ministry of Energy

Based on the interviews held with officials from the Ministry of Energy, it was noted that the Ministry did not have a web-based system to obtain/capture/track/collect data and information related to the stock monitoring of petroleum products in the country.

Also, a review of the National Petroleum and Gas Information System maintained by EWURA shows that the Ministry of Energy had not yet integrated with the system. This lack of integration prevented the Ministry from benefiting from automated data updates relevant to the country's stock monitoring of petroleum products.

The lack of a web-based system and the Ministry of Energy's inability to integrate with the National Petroleum and Gas Information System (NPGIS) was partly attributed to a lack of awareness of the benefits of a web-based system or the importance of integrating with the NPGIS.

The implications of a lack of a web-based system and integration with the NPGIS for stock monitoring of petroleum products in the country could be significant. Here are some of the potential implications:

- a) Without a web-based system, the Ministry of Energy may rely on manual processes for monitoring petroleum products/stocks. Manual methods can be time-consuming, prone to errors, and less efficient than automated systems. It may lead to delays in obtaining accurate information about stock levels and hinder effective decision-making and
- b) The absence of integration with NPGIS means that the Ministry does not benefit from automated updates of data relevant to stock monitoring. This can delay access to accurate and up-to-date information on petroleum products/stocks. Also, inaccurate or outdated data can lead to poor planning, inadequate stock management, and potential disruptions in the supply chain.

Lack of clear plan and coordination among the involved entities may lead to a risk of duplication of efforts and inefficient use of resources. This can result in wasted time, money, and human resources. Furthermore, the absence of a comprehensive strategic plan can delay the implementation of the petroleum reserve project. Lack of coordination and conflicting strategies can cause setbacks, as no unified direction guides the process.



CHAPTER EIGHT

AUDIT CONCLUSION

8.1 Introduction

This chapter presents the conclusions of the audit, which are categorised into two main parts: general and specific audit conclusions. The conclusions are based on findings drawn based on the audit's overall and specific objectives of this performance audit report.

8.2 General Audit Conclusion

The audit acknowledges the government's efforts, carried out through the Ministry of Energy, EWURA, TPDC and PBPA, in managing the importation of petroleum products in the country.

The Government of the United Republic of Tanzania (URT), through the Petroleum Bulk Procurement Agency (PBPA), has installed a Petroleum Products Discharge and Back Loading Monitoring System. This system is designed to fully monitor real-time data on petroleum discharge and back-loading operations at the 22 terminals located in Dar-es-Salaam, Tanga, and Mtwara. As of January 2024, the system was in the testing stage and was expected to be commissioned in March 2024. This installation aims to reduce fuel losses during discharging operations.

Also, the government, through the Tanzania Port Authority (TPA), has awarded the contract to the Joint venture of M/s China Railway Major Bridge Engineering and M/s WUHUAN Engineering for the construction of a single receiving terminal for a period of 24 months to alleviate the problem associated with the delay in discharge.

Furthermore, during the transitional period leading to infrastructure development for a single receiving point, the government has continued to utilise the TIPER's infrastructure as a Single Receiving Terminal (SRT).

Despite these efforts undertaken by the Ministry of Energy and its implementing entities, the audit concludes that the Ministry of Energy and its entities do not manage the importation process satisfactorily to ensure a secure supply of petroleum products, prevent stock-outs, and manage

inventory levels in the country. These are provided under specific audit conclusion as detailed below:

8.3 Specific Audit Conclusions

8.3.1 Inadequate Forecasting of Petroleum Importation in the Country

The PBPA does not analyse sales history data to establish patterns and trends that could enable the provision of properly forecasted information. Instead, it relies on data analysed by the Energy and Water Utilities Regulatory Authority (EWURA). This lack of analysis hinders PBPA from fulfilling its function and can pose risks to the security of the supply of petroleum products.

8.3.2 Ineffective Ordering and Receiving of Petroleum Products in the Country

A significant number of OMCs (30%) did not meet the conditions required for ordering the amount of fuel, as evidenced by the discrepancy between ordered amounts and guarantees. This non-compliance could disrupt the efficient operations of BPS.

Similarly, a large percentage of vessels were delayed in starting the discharge of petroleum products. However, its trend is declining from 74% to 65%. Also, the trend of vessels not discharging within the assigned month is increasing from 27% to 35%. These delays can lead to increased costs in terms of demurrage and can affect the timely supply of fuel in the market.

Moreover, OMCs did not pay demurrage costs to suppliers in time, resulting in outstanding balances. These delays were partly attributed to reconciliation issues between suppliers and OMCs. Payment delays result in financial penalties against the responsible OMCs, which could affect the reputation of the BPS and endanger the security of the supply of petroleum products in the country.

8.3.3 Ineffective Periodic Stock Monitoring of Petroleum

EWURA did not adequately monitor and regulate the petroleum industry's stock levels effectively, particularly in petroleum product stock maintained by OMCs and service stations/distributors. The findings reveal that many OMCs did not meet the legal requirement of maintaining stock for at least 15 days, and EWURA does not assess if the weekly reported stock complies with the requirement.

In addition, EWURA does not issue reports showing each product's market share. This compromised the authority's ability to determine weekly OMC stock positions per product and enable forecast petroleum to be ordered by each OMC. This limits the proper determination of accurate stock to be ordered and assesses the position of the petroleum stock as required by the available regulations and implementation manual.

On the other hand, it was noted that the NPGIS was unsuccessful in electronically capturing real-time stock positions of petroleum products, making it difficult for EWURA to access up-to-date operational data from regulated entities. Similarly, not all OMCs and retailers submitted stock position information through NPGIS, thus hindering accurate monitoring of the petroleum sub-sector.

Moreover, EWURA's oversight of the activities conducted by PBPA was inadequate. No one has comprehensively reviewed the BPS process, and inadequate EWURA and PBPA technical review meetings limited EWURA's understanding of the challenges and performance issues related to BPS. As a result, the system is not effectively regulated as required.

8.3.4 Inadequate Receiving and Storage Facilities for Petroleum Products

The infrastructure for receiving petroleum products is inadequate, resulting in extended vessel waiting times. This situation poses supply risks and leads to increased product costs.

In addition, the operational efficiency of certain facilities like KOJ1 is inadequate, partly due to limited port facilities, vessel interruptions and a lack of prioritisation for receiving white petroleum products (petrol).

The absence of a single receiving terminal for white petroleum products also contributes to demurrage costs, supply chain disruptions, and insufficient attention and investment in establishing the necessary infrastructure.

Furthermore, the audit identified a significant delay from TPDC in maintaining the strategic petroleum reserves as mandated by the National Strategic Petroleum Reserve Regulations of 2014. At the time of the audit, there was no realistic plan for implementing this project, which is important in ensuring continuity of supply and stabilisation of domestic oil prices.

8.3.5 Inadequate Coordination and Performance Measurement of the Entities in the Petroleum Subsector

The Ministry of Energy (MoE) faces challenges in developing the Petroleum Infrastructure Development Master Plan (PIDMP) within the targeted timeframe. This lack of planning and coordination hampers the ministry's ability to effectively and efficiently coordinate petroleum infrastructure development, potentially resulting in supply security issues and the risk of duplicating efforts.

On the other hand, MoE has not developed a National Petroleum Emergency Supply Plan despite its importance and as mandated by the Petroleum Act of 2015. This could hinder the ministry's ability to respond effectively to accidents, natural disasters, or other supply interruptions, potentially causing disruptions in the supply of petroleum products in the country.

In addition, MoE has not ensured that the TPDC develop the strategic reserves of petroleum products, as required. This could have implications for endangering the security of petroleum supplies in the country.

Moreover, MoE has not undertaken performance measurements on the activities of its entities responsible for importing petroleum products in the country, namely, EWURA, TPDC, and PBPA. This is partly attributed to inadequate performance measurement plans.

CHAPTER NINE

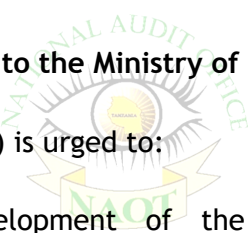
AUDIT RECOMMENDATIONS

9.1 Introduction

The management of the importation of petroleum products by the Ministry of Energy through EWURA, TPDC and PBPA has revealed notable weaknesses. In response, auditors have formulated recommendations to improve the noted practices. However, it should be noted that the provided recommendations are aligned with the audit scope and specific objectives. As such, the recommendations are specifically aimed at seeking to enhance the management of forecasting and demand requirements, ordering and receiving of the petroleum, storage of the petroleum in terms of the storage facility and strategic reserves, stock monitoring, coordination, and performance measurement of the entities involved in the management of the imported petroleum products.

9.2 Recommendations to the Ministry of Energy

The Ministry of Energy (MoE) is urged to:

- 
- (i) Prioritise the development of the Petroleum Infrastructure Development Master Plan and Petroleum Emergency Plan;
 - (ii) Coordinate the development of a single receiving infrastructure, development of port receiving pipes at Mtwara port for both diesel and petrol and development of pipelines to transfer white petroleum products from the Single Buoy Mooring (SBM) to storage tanks or depots; and
 - (iii) Measure the performance of its entities (EWURA, TPDC and PBPA), analyse reports submitted by its entities and issue feedback for improvement.

9.3 Recommendations to the Energy and Water Utilities Regulatory Authority (EWURA)

The Energy and Water Utilities Regulatory Authority (EWURA) is urged to:

- (i) Refine the methodology of establishing market share to ensure that each OMC has a market share for each product, and revise the stock monitoring reporting format to detect and take appropriate actions when necessary. Ensure that each OMCs maintains physical stock for not less than 15 days as per its respective market share;
- (ii) Ensure all targeted stakeholders use the National Petroleum and Gas Information System (NPGIS) as targeted to capture and report the real-time stock position of petroleum products;
- (iii) Monitor and enforce compliance with infrastructure installation standards, specifications, and international best practices, such as those recommended by National Association of Corrosion Engineers (NACE) standards; and
- (iv) Develop Key Performance Indicators (KPIs) for evaluating the Bulk Procurement System's performance, measuring its achievement, and reporting the status to the responsible entities for improvement.

9.4 Recommendations to the Tanzania Petroleum Development Corporation

The Tanzania Petroleum Development Corporation (TPDC) is urged to:

- (i) Develop and implement a comprehensive implementation strategy for establishing and maintaining the Strategic Petroleum Reserves (SPR). The recommended strategy should include clear targets for the SPR, a timeline showing the specific milestones for each implementation phase, and monitoring and evaluation mechanisms to ensure the undertaking and progress of the project.

9.5 Recommendations to the Petroleum Bulk Procurement Agency

The Petroleum Bulk Procurement Agency (PBPA) is urged to:

- (i) Improve the mechanism of establishing patterns and trends of sales historical data to undertake proper and reliable forecast of petroleum demand;
- (ii) Ensure that OMCs meet the conditions for ordering, including bank guarantees; and
- (iii) Strengthen the planning approach of delivery date ranges based on previous experience to avoid vessels staying for an extended period without commencing discharging the petroleum.



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19. URT (2020): *PBPA-Petroleum Bulk Procurement Implementation Manual 2020*; and
20. URT (2022): *Petroleum (Wholesale, Storage, Retail, and Consumer Installation Operations) Rules, 2022*

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21. URT (2009): *Installation of underground storage tanks, pumps/dispensers, and pipework at service stations and consumer installations, first edition 2009;*
 22. URT (2021): *EWURA Mid and downstream Petroleum Sub-sector Performance Review Report;*
 23. URT (2019): *EWURA Mid and downstream Petroleum Sub-sector Performance Review Report;*
 24. URT (1997): *Executive Agencies Act CAP.245*



APPENDICES



Appendix 1(A): Responses from the Ministry of Energy

This part details the overall responses from the audited entities and the responses to the comments, actions to be taken, and implementation timelines for each of the issued recommendations.

General Comment

In collaboration with other actors, the ministry will continue to put mechanisms in place for the smooth importation and supply of petroleum for the security of supply in the country. Nevertheless, some supply interruptions have been due to global issues that the Ministry cannot control alone. Depending on the availability of funds, the Ministry will develop PIDPM, which will clarify the responsibilities of the key actors.

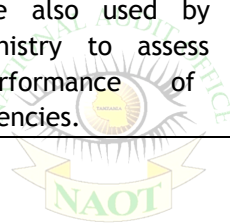
Specific Comment



SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
1	Prioritise the development of the Petroleum Infrastructure Master Plan, for which TPA is the custodian of the receiving infrastructure. To fully understand storage capacity, it's important to make a clear distinction between theoretical storage capacity and working capacity. While theoretical storage capacity refers to the physical capacity (both vertically and horizontally, as small storage capacity	The MoE recognise the importance of having the plan in place. Thus, PIDPM is and will continue to be a priority among other ministries' undertakings.	i) Effort is made to solicit finance for implementation for preparation of PIDPM ii) An emergency plan will be prepared	2026

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
	<p>can handle more volumes through efficient receiving and evacuation of the products.</p> <p>During the transition phase of infrastructure investment, TIPER will continue to serve as SRT. Emergency Plan.</p>			
2	<p>Coordinate the development of a single receiving infrastructure, development of port receiving pipes at Mtwara port for both diesel and petrol and development of pipelines to transfer white petroleum products from the Single Buoy Mooring (SBM) to storage tanks or depots.</p>	<p>TPA is the custodian of the receiving infrastructure. To fully understand storage capacity, it's important to make a clear distinction between theoretical storage capacity and working capacity. While theoretical storage capacity refers to the physical capacity (both vertically and horizontally), a small storage capacity can handle more volumes through efficient receiving and evacuation of the products.</p>	<p>i) The Ministry will formally agree with TIPER to serve as SRT. ii) The Ministry of Energy will continue to engage the Ministry of Transport and TPA regarding the construction and improvement of the receiving infrastructures</p>	

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		During the transition phase of infrastructure investment, TIPER will continue to serve as SRT.		
3	Measure the performance of its agencies, analyse reports submitted by its agencies and issue feedback for improvement.	Public and statutory bodies and corporations sign Key Performance Indicators with the Treasury Registrar every financial year. The KPIs are also used by the Ministry to assess the performance of its agencies.	Sample signed agreements between TR and agencies are attached for your review.	



Appendix 1(B): Responses from the EWURA

This part provides details on the overall responses from the audited entities and the responses to the comments, actions to be taken, and implementation timelines for each of the issued recommendations.


S/N	RECOMMENDATION	COMMENTS	ACTIONS TO BE TAKEN	TIMELINE
1.	Refine the methodology of establishing market share to ensure each Oil Market Company (OMC) has a market share for each product and revise the stock monitoring reporting format to detect and take appropriate action. Each OMC maintains physical stock per its market share for less than 15 days.	EWURA prepares the stock monitoring report in line with Regulation 4, which requires EWURA to inform the Minister of the available petroleum stock on a weekly basis. Periodically, EWURA monitors each OMCs on maintenance of stock and directs them to increase their stocks as per their market share for each particular product. To improve reporting, a detailed report will be prepared monthly, providing the status of stock maintenance by each OMC. This will allow OMCs to increase their imports when needed, as importation orders are placed on a monthly basis.	EWURA will prepare monthly reports on compliance of each OMC on maintenance of 15 days.	March 2024
2.	Ensure all targeted stakeholders use the National Petroleum and Gas Information System (NPGIS) as targeted to capture and report the real-time stock position of petroleum products.	On 30 th October 2023, EWURA amended the Petroleum (Wholesale, Storage, Retail, Consumer Installation Operations) Rules requiring the licensees to install Automatic Tank Gauge to allow automatic measurement of stocks in the tanks. In the same Rules, licensees are required to connect their sales and stock systems so that data is transmitted automatically to the NPGIS. Installation of ATG and connection of systems through NPGIS will allow data to be captured in real-time.	EWURA will follow up and enforce the Rules to ensure automatic data transmission through NPGIS.	June 2024

S/N	RECOMMENDATION	COMMENTS	ACTIONS TO BE TAKEN	TIMELINE
3.	Monitor and enforce compliance with infrastructure installation and standards, specifications and international best practices such as those recommended by NACE standards.	The recommendation is noted.	EWURA will enhance compliance monitoring of infrastructure installations.	March 2024
4.	Develop Key Performance Indicators (KPIs) for evaluating Bulk Procurement System's performance and measuring its achievement.	The recommendation is noted.	EWURA will develop the KPIs for evaluating BPS performance and measuring its achievement.	March 2024



Appendix 1(C): Responses from the PBPA

This part provides details on the overall responses from the audited entities and the responses to the comments, actions to be taken, and implementation timelines for each of the issued recommendations.

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
1	To improve the mechanism of establishing patterns and trends of sales historical data in order to undertake proper and reliable forecast of petroleum demand	Review of patterns and trends of historical consumption data of petroleum products will be done to improve the current system used for the same. 	Based on the existing forecasting procedures performed by the Agency, to improve detailed information to the user, PBPA should provide additional information to show patterns and trends between the forecasted importation data and rolling forecasting by using the current consumption rate (current sales trend)	
2	Ensure that OMCs meet the conditions for ordering, including bank guarantees.	All OMCs who participate in BPS meet the required terms and conditions for participation. The exception was on values of Bank Guarantees during the period when the world was experiencing challenges of the Russia-Ukraine war, whereby the demand and supply of petroleum products in the world were not in equilibrium. During this crisis, prices for petroleum products experienced an	All OMCs place their requirement based on the limit of bank guarantee, but the abnormality noted by auditors was due to the prevailing situation of the global crisis of dollar shortage that impacted largely the petroleum industry.	

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		<p>unprecedented increase of 118% from an average of USD 550 per ton to USD 1200 per ton, which implied drastic changes in Bank Guarantees, which needed additional collateral to their bankers. Due to this crisis, OMCs requested that the rate of bank guarantees be decreased from 5% to 3% to minimize the impact of eroding their capital by tying a substantial amount as a bank guarantee. Ultimately, after engaging the stakeholders, the Ministry revised the Regulation and BPS by reducing the rate of Bank Guarantee from 5% to 3%.</p> <p>Moreover, during this period, there was a shortage of USD used to settle procured petroleum products. Therefore, an increase in the value of Bank Guarantees would mean tying more forex on them rather than using the same to purchase petroleum products.</p>		
3	Strengthen the planning approach of delivery date ranges based on previous	Previous experience is utilized by taking the average number of days the vessels use at the discharge facilities (KOJ1 & SPM). Taking an average of actual days	Make follow-up to TPA on the progress of the construction of suitable discharge infrastructures for petroleum products.	

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
	<p>experience to avoid vessels staying for an extended period without discharging petroleum.</p>	<p>used implies all discharge experiences are incorporated. However, the demand for petroleum products (local and transit) exceeds the capacity of the discharge infrastructures at Dar es Salaam port. In this scenario, and to ensure the security of supply, a back-to-back system is used during the arrangement of the delivery date range so that the vessels are available at outer anchorage at all times for the continuity of utilizing the jetty. However, other unforeseen operational challenges are not accommodated as this would mean the provision of breathers between actual average days used by vessels. Such unforeseen challenges include technical issues, back-loading to Zanzibar and unknown non-BPS vessels. In this context, the Government, through TPA, is in the final stage of engaging the contractor to construct improved discharge infrastructures for petroleum products, ensuring efficient discharge without delays.</p>		

Appendix 1(D): Responses from the TPDC

This part provides details on the overall responses from the audited entities and the responses to the comments, actions to be taken, and implementation timelines for each of the issued recommendations.

General Comment

In 2024/25, TPDC plans to hire a consultant to conduct a project engineering design detailed feasibility study for setting up SPR and business model. This plan will narrate in detail the model of SPR to be implemented.

Specific Comment

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
1	TPDC should develop a comprehensive and detailed implementation strategy for establishing and maintaining the SPR. This strategy includes clear targets for the SPR, a timeline with specific milestones for each implementation phase, and monitoring and evaluation mechanisms to ensure progress.	Operating SPR through renting storage facilities is costly and may not lower or may not stabilize domestic oil prices; since storage charges will lead to higher oil prices per regulation 10(4) of the National Strategic Petroleum Reserve Regulations, 2014, which requires the price to the final	<ol style="list-style-type: none"> To procure a consultant for conducting a project engineering design detailed feasibility study for setting up SPR. Report Submission 	<ol style="list-style-type: none"> July 2024 to June, 2025; and June 2025 to December 2025

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		<p>consumer to be a weighted average of SPR and BPS.</p> <p>Among other measures taken by the Government to Maintain the security of supply in the country as part of the Strategic Petroleum Reserve. OMCs are required to maintain stock for 15 days for domestic use.</p> <p>As per regulation 6 of the Petroleum (General) Regulations, 2011, "Every wholesaler shall, at all times and depending on its respective market share for the previous year, maintain physical operational stocks in quantities of not less than fifteen days requirement.</p>		

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		<p>Based on the Tanzanian market and environment, the current SPR model is not user-friendly regarding capital and operation wise.</p> <p>To resolve the above challenges, TPDC is revising its long-term strategic plan. The preliminary assessment recommends different models suitable for the operation of SPR. TPDC will adopt either of the suggested models based on market interest and the Tanzanian environment as specified in the study.</p>		

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		<p>In 2024/25, TPDC plans to hire a consultant to conduct project engineering design, a detailed feasibility study for setting up SPR, and a business model to be used. This plan will narrate in detail the model of SPR to be implemented, i.e., the infrastructures required and the operation philosophy to be adopted, considering financial muscles, the Tanzanian market, and the environment in the implementation and operation of SPR.</p>		

Appendix 2: Audit and Sub Audit Questions

This part contains the main audit and sub-audit questions used in this report.

Audit Question 1	Is there adequate management of imported petroleum in the country?
<i>Sub-Question 1.1</i>	<i>To what extent is the stock of imported petroleum maintained to meet the minimum market consumption demand in the country?</i>
<i>Sub-Question 1.2</i>	<i>To what extent does the country have a strategic petroleum reserve infrastructure sufficient to ensure the security of the supply of petroleum in case of emergencies?</i>
Audit Question 2	Is forecasting the demand for petroleum effectively done to meet the petroleum requirement?
<i>Sub-Question 2.1</i>	<i>Is the system used to forecast demand and capture sufficient key data and information to establish realistic /actual petroleum requirements efficient?</i>
<i>Sub-Question 2.2</i>	<i>Does PBPA adequately use the demand forecast information in establishing the petroleum requirement to be imported?</i>
<i>Sub-Question 2.4</i>	<i>Does EWURA effectively oversee PBPA to ensure that the forecasting of petroleum is adequately/appropriately done?</i>
Audit Question 3	Do EWURA and PBPA effectively manage the country's ordering and receiving of imported petroleum?
<i>Sub-Question 3.1</i>	<i>Does PBPA ensure that order submitted by OMCs is done timely, accurately and aligned with all key requirements necessary for ordering petroleum?</i>
<i>Sub-Question 3.2</i>	<i>Does PBPA use the system to establish delivery date ranges and monitor incoming vessels to ensure efficient delivery of imported petroleum?</i>
<i>Sub-Question 3.3</i>	<i>Does PBPA have a functioning mechanism to control losses while receiving and distributing imported petroleum?</i>
<i>Sub-Question 3.4</i>	<i>Does EWURA oversee PBPA to ensure efficient ordering and receiving of petroleum in the country?</i>
Audit Question 4	Is storing imported petroleum adequately managed regarding storage facilities and strategic reserves?
<i>Sub-Question 4.1</i>	<i>Does TPDC maintain the strategic petroleum reserves?</i>
<i>Sub-Question 4.2</i>	<i>Does MoE ensure the petroleum storage facilities are adequate to avoid disruptions in the supply chain?</i>
<i>Sub-Question 4.3</i>	<i>Does EWURA adequately conduct periodic monitoring of petroleum stocks to ensure the security of the supply of petroleum in the country?</i>

Audit Question 5	Does the Ministry of Energy effectively coordinate performance measurement for agencies importing petroleum into the country?
<i>Sub-Question 5.1</i>	<i>Has the Ministry of Energy established and implemented the Petroleum Infrastructure Development Master Plan (PIDMP) to facilitate the coordination and management of petroleum stock in the country?</i>
<i>Sub-Question 5.2</i>	<i>Is the level of coordination between MoE and key stakeholders adequate and facilitates the achievement of national goals of ensuring the country's efficiency and security of petroleum supply?</i>
<i>Sub-Question 5.3</i>	<i>Does the Ministry of Energy effectively monitor the existing reporting system to enhance the management of the stock of imported petroleum in the country?</i>
<i>Sub-Question 5.4</i>	<i>Does the Ministry of Energy (MoE) assess the performance of its agencies (PBPA, TPDC, and EWURA) in the management of petroleum stocks to ensure the security of supply in the country?</i>



Appendix 3: Officials interviewed and Reasons for their Interviews

This part provides a detailed list of individuals and entities interviewed during the main study and the reasons for interviewing them.

Entity	Official Interviewed	Reason(s)
MoE	Commissioner, Petroleum and Gas Division Assistant Commissioner, Petroleum Section Principal Officer(s) of the Petroleum Section Principle Officer (s) of the Petroleum Development Section	To assess the effectiveness of: <ul style="list-style-type: none"> • Coordination of key stakeholders as performed by MoE; • MoE in evaluating the performance of PBPA, EWURA, and TPDC regarding the importation of petroleum into the country; • Reporting of petroleum stock in the country; • Strategies and implementation of plans for the development of the petroleum infrastructure master plan and • Initiatives made in the development of strategic petroleum reserves in the country.
EWURA	Director General Director, Petroleum Division Technical Manager of Petroleum Commercial Manager of Petroleum Information Communication Technology Manager	To assess the effectiveness of EWURA in <ul style="list-style-type: none"> • Managing the activities of forecasting requirements, ordering, and receiving petroleum in the country as performance by PBPA. • Conducting periodic stock monitoring. • Enforcing compliance of licensees • To get clarification on the usage of NPIGS and stock verification done
PBPA	Executive Director Supply and Logistics Manager Petroleum Planning Manager	To assess: <ul style="list-style-type: none"> • Adequacy of forecasting, ordering, and receiving of petroleum products • Effectiveness of measures for controlling petroleum losses during the discharging of petroleum products • The integrity of petroleum discharging and receiving infrastructures

Entity	Official Interviewed	Reason(s)
TPDC	Managing Director Director of Oil and Gas Business Manager of Oil and Gas	To assess the measures taken towards the implementation of the Strategic Petroleum Reserve in the country



Appendix 4: Documents Reviewed and Reasons for the Reviews

This part contains a list of documents reviewed from MoE, PBPA, EWURA and TPDC and reasons for the review.

Category of the documents	Title of the documents to be reviewed	Reasons for reviewing
Strategies and Plans from MoE, PBPA, EWURA, TPDC	Petroleum Reserve Strategies; <ul style="list-style-type: none"> • Strategic and action plans for 2020/21-2022/23; • MoE Budget of 2020/21-2022/23; and • MoE/ EWURA/PBPA Budgets for 2020/21-2022/23 	<ul style="list-style-type: none"> • To establish trends of budget/revenue and expenditures, efficiency, equity and reliability of the sources of funds regarding management of the imported petroleum in the country.
Performance Reports	<ul style="list-style-type: none"> • Stock Monitoring Reports for 2020/21-2022/23; • Annual Reports for 2020/21-2022/23; and • Internal Audit Reports for 2020/21-2022/23 	<ul style="list-style-type: none"> • To analyse the status of petroleum stocks in the country and strategies taken by the government to address them; • To evaluate and assess the effectiveness and efficiency of operations, projects, or individuals; • To evaluate and assess the effectiveness of the calculation of demurrage and the control system used to mitigate the delay of the vessels and • To evaluate the status of petroleum that is subjected to financial holds
Correspondences	<ul style="list-style-type: none"> • Correspondences Files and letters for 2020/21-2022/23 that related to the management of the imported petroleum in the country 	<ul style="list-style-type: none"> • To assess the correspondence between key actors in the management of the imported petroleum in the country

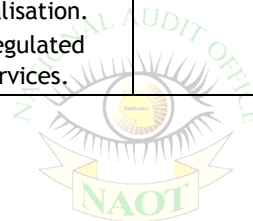
Appendix 5: Strategies from Sectorial Ministry and the Implementing Agency

This part presents strategies from MoE, PBPA, EWURA and TPDC on the management of the importation of Petroleum in the country.

Aspect	FYDP III 2021/22 - 25/26	MoE Strategic Plan	EWURA Strategic Plan	PBPA Cooperate Strategic Plan	TPDC
Goals	To establish petroleum reserve and oil storage infrastructure by 2025	<ul style="list-style-type: none"> • To promote the development of petroleum resources. • To promote petroleum infrastructure development 	To provide improved quality, availability and affordability of regulated goods and services.	<ul style="list-style-type: none"> • Bulk Procurement System improved. • Coordination and administration of procurement of petroleum products improved. 	<ul style="list-style-type: none"> • To provide reserves of petroleum products in physical stock in selected localities in the country; • Ensure continuity of supply all the time, in normal conditions and in case of national or international petroleum supply chain disruption or shortage of petroleum products; • Responding to incidents such as natural disasters or other interruptions of petroleum distributions in the country; and • Stabilise the domestic oil price.

Targets		<ul style="list-style-type: none"> • Petroleum Information System established by June 2026; • The Petroleum Infrastructure Development Master Plan (PIDMP) will be prepared and implemented by 2026. 	<ul style="list-style-type: none"> • At least 800 petroleum facilities are inspected annually for compliance monitoring in infrastructure standards. • At least 500 petroleum facilities are to be tested for marker concentration annually. • At least 400 petroleum samples are collected for quality check annually. • 100% of petroleum products for local consumption are imported annually as per the requirement 	<ul style="list-style-type: none"> • BPS efficiency increased; • Availability of petroleum products increased; • Appropriate projections of demand and supply increased; • Security in the country's economy increased • The reliability of BPS from other neighbouring countries who use this system increased. • Government collection of petroleum products increased 	Strategic Petroleum Reserves
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Aspect	FYDP III 2021/22 - 25/26	MoE Strategic Plan	EWURA Strategic Plan	PBPA Cooperate Strategic Plan	TPDC
Expected Output (s)	Project completed by the year 2025	Ensuring efficient and effective management of petroleum resources to embrace social and economic benefits.	<ul style="list-style-type: none"> • Strengthened regulatory environment. • Improved quality and availability of regulated goods and services. • Accelerated investment and industrialisation. • Affordable regulated goods and services. 	<ul style="list-style-type: none"> • Ensuring smooth bulk procurement systems and security of supply of petroleum products 	<ul style="list-style-type: none"> • Strategic Petroleum Reserves



Appendix 6: Detailed Key Process Description for the Importation of the Petroleum in the Country

This part presents the key processes involved in importing petroleum into the country.

PBPA Forecasting of the Petroleum Requirement

- All Oil Market Companies (OMCs) shall submit to the PBPA six months' petroleum products projections for each product type with clear assumption of driving factors used.
- The Petroleum Bulk Procurement Agency (PBPA) shall in consultation with Tanzania Revenue Authority (TRA) and EWURA review importation and sales history data for each individual OMC to identify patterns and trends and produce six months rolling importation forecast on monthly basis.
- On quarterly basis the Agency in collaboration with the OMCs shall review the annual forecasts and determine re-order level, the optimal parcel sizes, lead time and the frequency of shipment

Monthly Consolidation of Petroleum requirement from OMCs

- Each OMC shall at the beginning (within 10 days) of the month (M) submit to the Agency monthly petroleum products imports requirements for both local market and transit (optional) for delivery month (M+2).
- Each requirement from OMCs shall be accompanied with guarantee covering 5% of the estimated value of the allocated quantities

PBPA assessment on the adequate of the monthly Petroleum requirement

- In arriving at the adequate importation requirement the PBPA simulate petroleum stocks for each OMC and establish days covered based on respective market share as provided by EWURA.
- If the submitted requirements are not sufficient for specified period, the PBPA shall write to all OMCs requiring them to take necessary remedial measures

Acceptance of OMCs Order

- All OMCs placing order to the Agency shall instruct their bankers to remit 5% bank/cash guarantee in favour of the Agency on or prior to the date of submission of order.

Order Receiving and Distribution to each OMC

- Petroleum received through Bulk Procurement were received the berthing facilities located at Mtwara, Tanga and Dar Es Salaam Port.
- All owners of storage facilities shall submit to the Agency available storage capacities in their terminals and expansion plan on annual basis
- Only storage facilities approved by EWURA shall be allowed to receive products from petroleum importing vessels

Source: Auditors' Analysis of BPS Implementation Manual, 2023

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