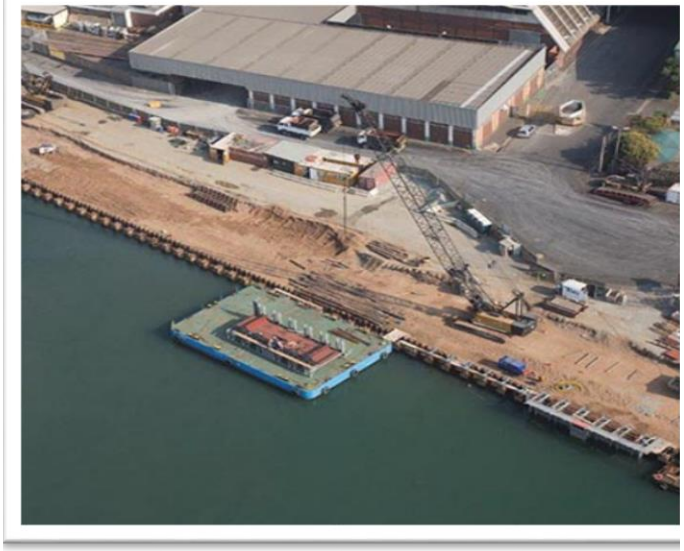
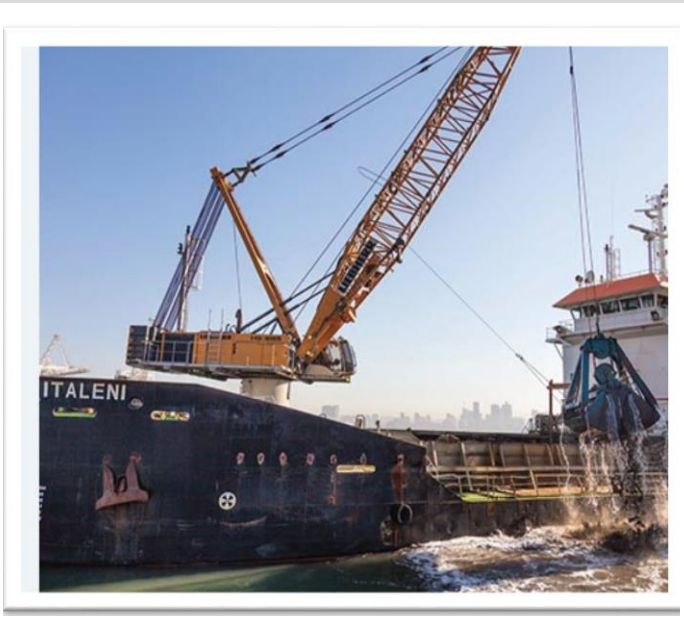
TRANSNET NATIONAL PORTS AUTHORITY

TARIFF APPLICATION FOR FINANCIAL YEAR 2016/17





Tariff Application to the Ports Regulator in terms of the National Ports Act, 2005 (Act No.12 of 2005)

Contents

1. Executive Summary 5
2. Introduction 10
3. Legal Basis and Regulatory Requirements 10
3.1 Section 72 of the Act sets out the Authority's obligations in relation to its tariff book: "Authority's tariff book" 10
3.2 The Ports Directives 11
3.3 Regulatory Manual / Tariff Methodology 12
4. The Business of the Authority 17
4.1 Introduction 17
4.2 Functions of the Authority 17
4.3 Transnet Market Demand Strategy (MDS) 18
4.4 Tariffs in Perspective 22
5. Port Infrastructure Development Plan and Capital Expenditure 24
5.1 Port Investment planning 24
5.2 The Authority's Capital Investment Progamme 25
6. The Authority's Total Revenue 27
6.1 Real Estate Revenue 27
6.2 Marine Business Revenue 28
6.2.1 The Authority's Volumes 28
6.3 Cargo 29
6.3.1 Containers 30
6.3.2 Automotives 32
6.3.3 Coal 33
6.3.4 Iron Ore 33
6.3.5 Manganese Ore 33
6.3.6 Liquid Bulk 34
6.3.7 Marine Services 34
7. Tariff Application Approach 35
7.1 Revenue Requirement Formula 35
7.1.1 Regulatory Asset Base 35
7.1.2 Weighted Average Cost of Capital 39

7.1.3 Valuation of the RAB 40
7.1.4 Taxation 41
7.1.5 Operating Costs 42
7.1.6 Revenue Claw-back 42
7.2 Revenue Requirement 46
7.3 Tariff Application 46
8. Tariff book 49
8.1 The Authority's Pricing Strategy 49
8.2 The Regulators Response to the Authority's Pricing Strategy 50
8.3 Tariff Book Proposal for FY 2016/17 51
9. Port Efficiency 53
9.1 Terminal Operations Licencing Oversight 55
10. Marine Operations Management 56
10.1.1 Pilotage 56
10.1.2 Towage 57
10.1.3 Berthing Services 57
11. Conclusion 58
ANNEXURE A: The Authority's Tariff Book 59
ANNEXURE B: Capital Expenditure 61
ANNEXURE C: Operating Expenditure 70
ANNEXURE D: Additional Operating Cost Information 80
ANNEXURE E: Required Revenue Calculation Based on Bilateral Contracts at Contract Rates 83

ABBREVIATIONS AND ACRONYMS

AFS	Annual Financial Statements
APDP	Automotive Production Development Program
BER	Bureau of Economic Research
BRICS	Brazil, Russia, India, China & South Africa
CAGR	Compounded Annual Growth Rate
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
CMEO	Chief Marine Engineering Officer
CPI	Consumer Price Index
CPT	Cape Town
CSI	Corporate Social Investment
CWIP	Capital Work In Progress
DBN	Durban
DBT	Dry Bulk Terminal
DCT	Durban Container Terminal
DDOP	Durban Dig Out Port
DIA	(Old) Durban International Airport
DMS	Dimson, Marsh and Staunton
DMTN	Domestic Medium Term Note
DORC	Depreciated Optimised Replacement Cost
DoT	Department of Transport
DRS	Dredging Services
EIMS	Enterprise Information Management Services
EL	East London
EPMO	Enterprise Programme Management Office
ETIMC	Excessive Tariff Increase Margin Credit
FEL	Front End Loading
FMCSA	Ford Motor Company of Southern Africa
GDP	Gross Domestic Product
GMTN	Global Medium Term Note
GPPCS	Global Port Pricing Comparator Study
GRT	Gross Registered Tonnage
HCM	Human Capital Management
HOPS	Haulier-Road Operations Performance Standards
IAS	International Accounting Standards
IDZ	Industrial Development Zone
IPMS	Integrated Port Management System
JOC	Joint Operations Centres
JSE	Johannesburg Stock Exchange
KAM	Key Account Manager
LTPF	Long-term Transnet Planning Framework
m	Million
MDS	Market Demand Strategy
MIDP	Motor Industry Development Plan
MOPS	Marine Operations Performance Standards
MPT	Multi-Purpose Terminal
MRP	Market Risk Premium

MSOE	Marine School of Excellence
MTBSA	Man Truck and Bus South Africa
Mtpa	Millions tonnes per annum
NAAMSA	National Association of Automobile Manufacturers of South Africa
NBV	Net Book Value
NERSA	National Energy Regulator of South Africa
NGQ	Ngqura
NIMS	National Infrastructure Maintenance Strategy
NPA	National Ports Authority
NPCC	National Port Consultative Committee
NPP	National Ports Plan
OD	Operating Divisions
OEMs	Original Equipment Manufacturers
OPEC	Organisation of Petroleum Exporting Countries
Opex	Operating Costs
PCC	Port Consultative Committee
PE	Port Elizabeth
PLP	Project Life Cycle Process
RAB	Regulatory Asset Base
RR	Revenue Requirement
RfR	Risk Free Rate
RBCT	Richards Bay Coal Terminal
RCB	Richards Bay
ROD	Record of Decision
ROPS	Rail Operations Performance Standards
SA	South Africa
SAMSA	South African Maritime Safety Association
SARB	South African Reserve Bank
SARS	South African Revenue Services
SBIDZ	Saldanha Bay Industrial Development Zone
SLD	Saldanha Bay
SOC	State Owned Company
SOE	State Owned Enterprise
SRAB	Starting Regulatory Asset Base
TCC	Transnet Corporate Centre
TEU	Twenty-foot Equivalent Unit
TOC	Trended Original Cost
TONS	Tonnages
TOPS	Terminal Operator Performance Standards
TP	Transnet Properties
TPT	Transnet Port Terminals
TSHD	Trailing Suction Hopper Dredger
UK	United Kingdom
USA	United States of America
VWSA	Volkswagen South Africa
WACC	Weighted Average Cost of Capital
WACD	Weighted Average Cost of Debt

1. Executive Summary

In terms of Section 72 (1) (a) of the National Ports Act, 2005 (Act No. 12 of 2005) ("the Act"), Transnet National Ports Authority, a division of Transnet SOC Limited ("the Authority") is required, with the approval of the Ports Regulator ("the Regulator"), to determine tariffs for services and facilities offered by the Authority and to annually publish a tariff book containing those tariffs. The Port Directives were approved on 13 July 2009 (gazetted on 06 August 2009) and amended on 29 January 2010. In terms of these Directives, when considering the proposed tariffs for the Authority, the Regulator must ensure that such tariffs allow the Authority to:

a) recover its investment in owning, managing, controlling and administering Ports and its investment in port services and facilities;

b) recover its costs in maintaining, operating, managing, controlling and administering Ports and its costs in providing port services and facilities; and

c) earn a return commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities.

In determining the tariffs, the Authority applies the prescribed Tariff Methodology issued by the Regulator on 31 July 2014. The approved Tariff Methodology allows the Regulator to govern the Authority's tariff setting process and considers a multi-year approach, applicable to the 2015/16 to 2017/18 tariff years. It further allows for an annual review and an annual adjustment of tariffs within the three year period as opposed to fixing the tariffs for the full period.

The approach applicable to the tariff period FY2016/17, per the Tariff Methodology, is based on the Revenue Requirement (RR) formula as follows:

Revenue Requirement

= Regulatory Asset Base (RAB) x Weighted Average Cost of Capital (WACC)

+ Operating Costs + Depreciation + Taxation Expense ±Claw-back

± Excessive Tariff Increase Margin Credit (ETIMC)

The components of the RR formula has been summarised in the Tariff Methodology as follows:

a) ***Regulatory Asset Base (RAB)***: *The RAB represents the value of assets that the NPA is allowed to earn a return on. The value of the assets in the RAB is indexed by inflation each year based on the Trended Original Cost ('TOC') approach.*

b) ***Vanilla Weighted Average Cost of Capital (WACC):*** *The WACC represents the risk adjusted opportunity costs of capital and is the minimum return for an investment in order to continue to attract capital, given the risks. A real WACC is applied, given that the RAB is indexed by inflation.*

c) ***Operating Costs:*** *The Regulator will analyse the operating cost estimates for the period on a detailed line by line basis. The NPA is required to provide detailed and complete motivation for each of the expenses applied for.*

d) ***Depreciation:*** *The depreciation of the assets in the RAB will be calculated as a straight line 40 year on the opening balance of the RAB.*

e) ***Taxation Expense:*** *The Regulator will use the pass-through tax approach where the vanilla WACC will be applied to the average RAB for the period under consideration, less the interest cost of debt and the corporate tax rate to determine the tax liability to be treated as an expense in the RR calculation.*

f) ***Claw-Back:*** *The key purpose of applying the claw-back is to ensure that the NPA or any port user is fairly treated and is not subjected to unfair gains and losses. The Regulator will spread the total impact of over/under recovery of revenue over a period of two tariff determinations.*

g) ***Excessive Tariff Increase Margin Credit (ETIMC):*** *The Regulator considers it prudent to avoid future tariff spikes by retaining and increasing the NPA's ETIMC.*

The Tariff Application FY 2015/16 marked the inception of the submission of a Multi-Year Tariff Application to the Regulator. The Tariff Application, prepared in accordance with the Tariff Methodology, included a fixed tariff adjustment for FY 2015/16 with indicative tariff adjustments for FY 2016/17 and FY 2017/18. The approach adopted by the Authority at the time of submitting the Tariff Application FY 2015/16 was based on the consideration of bilateral contracts at the official contract rates.

The table below highlights the Tariff Application FY 2015/16, with the indicative tariff adjustments for FY 2016/17 as submitted to the Regulator on 01 September 2014.

Table 1: Tariff Application FY 2015/16 submitted to Regulator on 01 September 2014

Details	FY 2015/16	FY 2016/17	FY 2017/18
	Fixed Tariff Year	Indicative Tariff Years	
	R'm		
RAB	67 000	72 995	81 532
Vanilla WACC	5.59%	5.78%	6.01%
Return on Capital	3 745	4 219	4 900
Plus: Depreciation	1 807	1 968	2 201
Plus: Operating Costs	5 020	5 489	5 905
Plus: Taxation Expense	964	1 064	1 219
Plus/Less: Clawback	(328)	310	-
Revenue Allowed	***11 208***	***13 050***	***14 225***
Less: Real Estate	(2 449)	(2 674)	(2 933)
Marine Revenue	***8 759***	***10 376***	***11 292***
Tariff Increase	***9.47%***	***15.91%***	***6.49%***

In determining the Tariff Application FY 2016/17, the Authority has further been guided by the principles included in the Record of Decision (ROD) FY 2015/16 which considers bilateral contracts at approved tariff book rates. The Authority has adopted the aforementioned approach of the Regulator on the assumption that the recovery of the revenues based on tariff book rates would be legally enforceable.

Applying the approved Tariff Methodology together with the consideration of the latest economic indicators and using the Regulators approach regarding bilateral contracts, results in the following Tariff Application FY 2016/17 (with a fixed tariff adjustment for FY 2016/17 and indicative tariff adjustments for FY 2017/18 & FY 2018/19[1]):

[1] Whilst the approved tariff methodology is only applicable up to FY 2017/18, the Authority has modelled FY 2018/19 in order to demonstrate the tariff trajectory over three years.

Table 2: Revenue Requirement FY 2016/17

Details	FY 2015/16 ROD R'm	FY 2016/17 Fixed Tariff Year R'm	FY 2017/18 Indicative Tariff Years R'm	FY 2018/19 Indicative Tariff Years R'm
RAB	66 789	73 483	80 326	89 203
Vanilla WACC	6.38%	5.31%	5.56%	5.63%
Return on Capital	4 261	3 902	4 466	5 022
Plus: Depreciation	1 791	1 928	2 117	2 355
Plus: Operating Costs	5 020	5 487	5 967	6 503
Plus: Taxation Expense	768	1 191	1 072	1 209
Plus/(Less): Clawback	(581)	(680)	66	-
Plus/(Less): ETIMC	(150)	67	-	-
Revenue Allowed	***11 109***	***11 895***	***13 688***	***15 089***
Less: Real Estate	(2 449)	(2 600)	(2 874)	(3 147)
Marine Revenue	***8 660***	***9 295***	***10 814***	***11 942***

As illustrated in Table 2 above, the Authority has proposed an increase to the Excessive Tariff Increase Margin Credit (ETIMC) facility by R67m as the Authority forges ahead with the Transnet MDS programme. The use of the ETIMC facility allows for a smoother tariff trajectory.

The resultant Revenue Requirement for FY 2016/17 is R11 895m comprising of Real Estate Business revenue of R2 600m and Marine Business revenue of R9 295m. In order to determine the Marine Business revenue to be derived from tariff adjustments, the required revenue of R9 295m is compared with the expected revenue of R8 571m for FY 2015/16 and increased for the expected growth in volumes of 2.40% for FY 2016/17.

Accordingly, the same principles are applicable for FY 2017/18 and FY 2018/19 and are demonstrated in Table 3 below.

Table 3: Marine Revenue for FY 2016/17 to FY 2018/19

Marine Revenue	FY 2016/17 Fixed Tariff Year R'm	FY 2017/18 Indicative Tariff Years R'm	FY 2018/19 Indicative Tariff Years R'm
Prior Year Revenue	8 571	9 295	10 814
Estimated Volume Growth	2.40%	3.20%	2.60%
Revenue after volume growth	8 777	9 592	11 095
Required Revenue	9 295	10 814	11 942
Tariff Increase	**5.90%**	**12.74%**	**7.63%**

This translates into an average tariff adjustment of 5.90% for FY 2016/17, and indicative tariff adjustments of 12.74% for FY 2017/18 and 7.63% for FY 2018/19.

The average tariff adjustment over the three year period is approximately 8.76% which is in line with that communicated to stakeholders at the launch of MDS that tariff adjustments would be within the CPI+3% range and is demonstrated in Table 4 below:

Table 4: Average Tariff Adjustments over a three year period

Details	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	Average over period
	ROD	Tariff Application FY 2016/17			
	% Increase				
Average Tariff Increase : FY 2015/16 to FY 2017/18	4.80%	5.90%	12.74%		**7.81%**
Average Tariff Increase : FY 2016/17 to FY 2018/19		5.90%	12.74%	7.63%	**8.76%**

Had the Authority taken the approach used in the Tariff Application FY 2015/16 of including the bilateral contracts at the official contract rates, it would result in Required Revenues of R11 968m with an average tariff adjustment of 8.93% for FY 2016/17.The detailed calculations in this regard are highlighted in ***Annexure E***.

In accordance with the Tariff Methodology and guidance provided in past ROD's, the Authority hereby applies to the Regulator for revenue of R11 895m comprising of Marine Business revenue of R9 295m and Real Estate business revenue of R2 600m for FY 2016/17. This translates to an average overall tariff adjustment of **5.90%.**

Further to the above, and in line with the objective of the Tariff Strategy, the Authority proposes that the average tariff adjustment of **5.90%** be differentiated as follows:

- **6.80% on marine charges (shipping lines);**
- **5.90% on exports of dry bulk (coal, iron ore & manganese); and**
- **5.60% on all other cargo dues.**

2. Introduction

The Authority is the landlord in the South African port system. The Authority is responsible for the safe, efficient and effective economic functioning of the national ports system which it manages, controls and administers. The key business activities of the Authority are to provide and manage port infrastructure and maritime services. In a broader context, the Authority also undertakes to facilitate the development of trade and commerce through market collaboration for the economic benefit of the national economy.

This Tariff Application commences by introducing the primary legislation that deals with the Authority's tariffs and progresses to give an overview of the ports business and infrastructure plans. The tariff application has been prepared in line with the approved Tariff Methodology in order to determine the Revenue Requirement of the Authority, with the determinants for the Authority's revenue being described accordingly.

The Tariff Application that follows has been prepared for a three year period (FY 2016/17 to FY 2018/19) with a fixed tariff adjustment for FY 2016/17 and indicative tariff adjustments for FY 2017/18 and FY 2018/19 (whilst the approved Tariff Methodology is only applicable up to FY 2017/18, the Authority has included FY 2018/19 in order to demonstrate a fair tariff trajectory). The Tariff Application concludes with an overview of efficiency improvements being implemented at the ports.

3. Legal Basis and Regulatory Requirements

The regulatory framework for the Authority's tariffs is informed by the Act, and the Directives promulgated by the Regulator. In terms of the regulatory framework the Authority is required, with the approval of the Regulator, to determine tariffs for services and facilities offered by the Authority and to annually publish a tariff book containing those tariffs.

3.1 Section 72 of the Act sets out the Authority's obligations in relation to its tariff book: "Authority's tariff book"

72. (1) (a) The Authority must, with the approval of the Ports Regulator, determine tariffs for services and facilities offered by the Authority and annually publish a tariff book containing those tariffs;

(b) The Authority may, with the approval of the Ports Regulator, amend the tariff book whenever it is necessary to do so.

(2) The Authority must, prior to any substantial alteration of a tariff, consult with the National Port Consultative Committee.

(3) Subject to section 9 of the Competition Act, 1998 (Act No. 89 of 1998), the tariffs contemplated in subsection (1) may vary between ports.

(4) Notwithstanding the provisions of this section, the Authority may enter into an agreement with a licensed operator or a party to an agreement or a port user for the variation of any tariff contemplated in subsection (1).

3.2 The Ports Directives

3.2.1 The Regulator developed the Directives, which were gazetted on 6 August 2009 and amended on 29 January 2010. Of these, the most pertinent to the setting and approval of tariffs are Directive 22 (which deals with the Approval and amendment of tariffs) and Directive 23 (which deals with Tariff requirements).

3.2.2 Directive 23(1) requires the Regulator to consider whether the tariffs proposed by the Authority reflect and balance:

a) A systematic tariff that is applicable on a comparable basis;
b) Fairness;
c) The avoidance of discrimination save where discrimination is in the public interest;
d) Simplicity and transparency;
e) Predictability and stability;
f) The avoidance of cross subsidisations save where cross subsidisation is in the public interest; and
g) The promotion of access to ports and efficient and effective management and operation in ports.

3.2.3 The opening statement of sub-directive 23(2), reads as follows: In considering the Authority's proposed tariffs, and any subsequent proposed significant variations, the Regulator must enable the Authority to;

(a) Recover its investment in owning, managing, controlling and administering ports and its investment in port services and facilities;

(b) Recover its costs in maintaining, operating, managing, controlling and administering ports and its costs in providing port services and facilities; and

(c) Make a profit commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities.

3.2.4 This sub-directive prescribes that the Regulator must enable the Authority to recover its investment, costs and to earn a profit commensurate with the risk it bears.

3.3 Regulatory Manual / Tariff Methodology

3.3.1 On 31 July 2014 the Regulator issued a Regulatory Manual ("Tariff Methodology") applicable for the tariff years 2015/16 to 2017/18. The Tariff Methodology will be multi-year in its approach, with the aim of continued improvement in the level of transparency and consistency in the tariff setting process.

3.3.2 The Tariff Methodology allows for an annual review and an annual adjustment of tariffs within the three year period as opposed to fixing the prices for the full period.

3.3.3 Furthermore, the Regulator is of the view that guidelines contained in the Tariff Methodology will assist in narrowing the gap between what is requested by the Authority and subsequently granted by the Regulator.

3.3.4 The approach decided upon is based on the Revenue Requirement methodology with the building blocks (as described in the Tariff Methodology) is set out below:

3.3.4.1 **Regulatory Asset Base (RAB):** The value of total assets in the RAB is indexed by inflation each year - the Trended Original Cost ("TOC") approach. Each year, estimated Capex and depreciation is added to the closing balance for the previous year to arrive at an updated closing balance for the current year. The expected working capital balance is added to arrive at a total RAB estimate, which is averaged over the year to account for the progressive spending of Capital Works In Progress (CWIP) over the period. The RAB formula applicable to the FY 2015/16 to FY 2017/18 tariff years is as follows:

$$RAB_y = \frac{1}{2}[RABc, y + RABo, y] + wy$$

$$RABc,y = RABo,y\,(1 + CPIy)1 + CWIPy - Dy$$

Where:

RABy = value of the RAB used to determine the returns for period y

RABo,y = opening value of RAB for the period y

RABc,y = closing value of RAB for the period y

Wy = forecast average net working capital over period y

CWIPy = value of expected capital investment over the period y

Dy = depreciation allowance for assets over the review period y

CPIy = annual rate of general inflation expected over period y

3.3.4.2 **Depreciation**: The following formula which takes into consideration the principle of financial capital maintenance to fully account for capital expenditure and inflation, is used in the calculation of depreciation:

$$Depreciation = (RAB(o,y) + (RAB\ (o,y).CPI(y))+(Capex(y)/2.CPI(y)))/40$$

3.3.4.3 **Inflation trending:** The inflation rate for calculating the trend in the value of assets will be the Consumer Price Index (CPI) forecast for each financial year during the tariff period as at the latest forecast published by the National Treasury, which if unavailable by the time of calculation will be substituted with the latest reputable forecast from leading independent institutions such as the Bureau of Economic Research (BER). The same inflation rate will be used in the calculation of the weighted average cost of capital.

3.3.4.4 **Capital Works In Progress (CWIP):** Detailed projections for the tariff period, including tariff year 2014/15, per asset class, service and project as well as monthly planned expenditure schedules must be provided to motivate the CWIP to be included in the RAB.

3.3.4.5 **Working Capital:** The estimate of working capital, equates to the actual *net* working capital as per the latest available NPA annual financial statements, consisting of accounts receivables plus inventory less accounts payables (i.e. operating cash is excluded), adjusted by forecast volume growth and CPI inflation for the following year. In addition, CWIP payables, which are estimated at $1/12^{th}$ of the capital expenditure projected for that year is included.

3.3.4.6 **Weighted Average Cost of Capital (WACC) – Vanilla WACC:** In general, the WACC represents the risk adjusted opportunity cost of capital and is the minimum return for investment in order to continue to attract capital, given risks.

A real WACC (cost of equity and cost of debt) will be applied and expressed in Vanilla terms (i.e. post-tax cost of equity and pre-tax cost of debt) and accordingly, a separate allowance for tax expense in the revenue requirement formula is required.

$$WACC_{vanilla} = k_d.g + k_e\ (1-g)$$

Where:

k_d = *pre-tax cost of debt*

k_e = *post tax cost of equity*

g = *gearing which is debt over total capital*

The components of the WACC are as follows:

- **Cost of Equity**: The post-tax cost of equity is calculated with reference to the Capital Asset Pricing Model (CAPM), which is expressed as:

$$k_e = r_f + \beta \times MRP$$

Where:

r_f = *real risk free rate*

β = *Measure of NPA's exposure to market (non-diversifiable) risk*

MRP = *The market risk premium measuring the premium over and above the risk free rate that investors might expect in return*

- **Risk Free rate** (RFR): The twenty year government bond is an appropriate measure of the Risk Free rate (RFR), and, in particular, the R186 bond instrument (yield) as it adequately reflects the market's perception of sovereign risk and inflation going forward. The average RFR is calculated over a five year period (from August 2009 to July 2014) for the first tariff year, August 2010 to July 2015 for the second and from August 2011 to July 2016 for the final tariff year in the period).

The Real RFR is deduced by using the Fisher Equation.

$$1 + i = (1 + r)(1 + E(I))$$

Where:

i = *nominal rate*

r = *real rate*

$E(I)$ = *Expected inflation*

- **Market Risk Premium (MRP):** The MRP is in essence forward-looking and, as such, it cannot be observed but must be forecasted. For the tariff period, the Regulator will use the Dimson, Marsh and Staunton (DMS) estimate of the geometric mean MRP as measured against bonds for South Africa to determine a MRP for the Authority's cost of equity calculation. The use of the DMS dataset over the full 113 year period requires the use of the geometric mean to better address concerns related to the correlation in excess returns and mean reversion.

- **Beta (β)**: Due to the Authority not being a traded company, there is no beta (β) published reflecting its risk relative to firms listed on the Johannesburg Stock Exchange (JSE). A beta has to be set to reflect the risks faced by NPA under the RR methodology. This must ensure an appropriate return for the risk faced.

  The inclusion of a claw-back mechanism reduces exposure to systematic risk and the existence of an interventionist regulatory regime requires the Regulator to use a Beta substantially lower than large firms listed on the JSE such as the JSE Top 40.

  For the tariff period covered, the Regulator will use the 0.50 asset beta decided upon and motivated in the previous Records of Decision (ROD).

  The Hamada equation is used to re-lever the asset beta resulting in an equity beta of 0.86.

- **Gearing (g):** The appropriate gearing for the entity for period is 50%.

- **Cost of Debt:** NPA's actual, embedded debt costs should be used to determine the cost of debt applied within the WACC. The average embedded Transnet group cost of debt (*pre-tax nominal*) of Transnet SOC Ltd should be used for the 2015/16 tariff year, as no current alternative exists.

3.3.4.7 **Taxation Expense (t):** A corporate tax rate of 28% will be used for the period. The pass-through tax approach, where the vanilla WACC will be applied to the average RAB for the period under consideration, less the interest cost of debt and wear and tear, and other tax allowances. The corporate tax rate will be used to determine the tax liability which shall be treated as an expense in the RR calculation.

*Tax allowance = (Net revenue before tax allowance)/ (1-t)*t*

The calculation of tax allowance must also reflect the flow of funds related to any claw-back calculated as well as ETIMC allowances to ensure adequate tax cover for the NPA.

3.3.4.8 **Operating Costs:** The NPA is required to provide detailed and complete motivation for the applied expenses, especially on large items like labour and energy costs.

Transnet group costs will be included in the total allowed expenses subject to the requirement that the NPA submits detailed explanation and motivation for the amount to be transferred to Transnet group.

In addition, the NPA shall provide externally audited financial reports with all supporting documentation and detailed explanations including basis of allocation and policy documents that support such allocations.

3.3.4.9 **Claw-back:** The key purpose of applying claw-back is to ensure that the NPA or any port user is fairly treated and is not subjected to any unfair gains or losses that are a result of incorrect forecasting, inaccurate information and system shocks. Its main application is to reduce the impact of differences between the allowed revenue (based on a number of forecasts and assumptions) calculated at the time of the tariff application and actual audited figures.

The variables to be estimated in line with the Tariff Methodology, annually, prior to the start of the following tariff year for claw-back purposes are the:

- RAB (including capex)
- Depreciation
- Operating Expenditure
- Tax allowance
- Volumes
- Inflation (CPI)

The total impact of over/under recovery of revenue will be spread over a period of two tariff determinations.

3.3.4.10 **Excessive Tariff Increase Margin Credit (ETIMC):** The Regulator regulates in the long term interest of the industry. This requires that the Regulator not only confine itself to the immediate tariff decision, but also consider ways to ease any future shocks to the system. It is generally accepted that capital expenditure will spike at some point in the foreseeable future, but that these projects have not as yet been specified to a level of detail that allows for accurate prediction. As such, the Regulator considers it prudent to avoid future tariff spikes by retaining and increasing the Authority's ETIMC.

The Regulator may authorise the release of part or the whole of the value of the ETIMC facility to influence tariff levels whenever it deems necessary including, but not limited to spikes in tariffs (defined as an average tariff increase in excess of the inflation forecast) due to sharp increase in capital expenditure, volume volatility, or and market related factors. The Regulator may also consider national objectives in any decision to add to, or to utilise the ETIMC facility to adjust tariffs.

3.3.4.11 **Volume Forecast:** The NPA is required to submit detailed volume forecasts with reasons as well as well as revenue calculations based on the forecast volumes and current tariff levels as well as proposed tariffs for the period.

3.3.4.12 **Introduction of efficiency incentive:** The Regulator will continue to monitor progress of the results of the Terminal Operator Performance Standards (TOPS) as well as Marine Operators Performance Standards (MOPS) and will introduce an efficiency component to the tariff determination when the Regulator is satisfied that a credible efficiency monitoring system has been established.

4. The Business of the Authority

4.1 Introduction

The Authority operates within the port industry, providing services to its target market comprising of port users, which include terminal operators, shipping lines, ship agents, cargo owners and the clearing and forwarding industry. The Authority owns and manages nine ports within South Africa namely, Port Nolloth, Saldanha Bay, Cape Town, Mossel Bay, Port Elizabeth, Ngqura, East London, Durban and Richards Bay.

Port Nolloth is currently not a commercial port and renders maritime services of a basic nature supporting fishing and supply vessels.

Port infrastructure and maritime services are provided in five market segments namely, containers, dry bulk, liquid bulk, break-bulk and automotive. The major commodities handled at the ports are coal, iron ore, manganese, containers, automotive, steel, fruit, ferrochrome and petroleum products. Growth of these commodities is a function of global demand, logistics infrastructure capacity and supply chain efficiencies which include port efficiencies.

Port users fall into three main categories, namely, terminal operators, shipping lines and cargo owners. While numerous other parties utilise the port, they do so to a lesser extent than these principal port users.

4.2 Functions of the Authority

The National Commercial Ports Policy requires that the Authority be responsible for the management of the national commercial port system as a landlord port authority. Being a landlord port authority means that the Authority:

- owns, develops and maintains port infrastructure;
- does not engage in port operations (except as operator of last resort);
- does not employ cargo handling labour;
- fulfils a port regulatory function including oversight and port landowner function; and
- owns all port land.

The Authority's core functions (as set out in Section 11 of the Act) can be summarised in the table as follows:

Table 5: The Authority's Core Functions

Function	Detail
Landlord	Promote the use, improvement and development of ports, and control land use within the ports, having the power to lease port land under conditions it determines.
Master planner	Plan, improve, develop and maintain port infrastructure.
Controller of ports navigation	Make and apply rules to control navigation within port limits and approaches, ensure protection of the environment and ensure safety and security within port limits.
Controller of ports services and facilities	Ensure that port services and facilities are provided, and may enter into agreements or license other parties to provide these.
Marketer and administrator	Ensure that adequate, affordable, equitable and efficient port services and facilities are provided for port users.
Change agent	Ensure non-discriminatory, fair, transparent access to port services and facilities; advancement of previously disadvantaged people; promotion of representation and participation in terminal operations; enhanced transparency in port management.
Coordinator with other State Agencies	Advise on all matters relating to the port sector, and liaise with all stakeholders.

4.3 Transnet Market Demand Strategy (MDS)

The South African ports occupy a central position in the transport and logistics chain with 98% of cargo volumes passing through them annually. Ports are inherently required to play a leading role in influencing economic growth to respond to market conditions.

The MDS will enable growth in key commodities in the long term and will position South Africa globally as a key exporter of bulk commodities. According to a May 2014 Creamers Media Report on Global Iron Ore Trade, South Africa has now moved into third position on the global ranking of iron ore exporters. South Africa is also the fourth largest supplier of iron ore to China, leading manganese exporter globally, and the leading logistics hub for sub-Saharan Africa.

The MDS anticipates R336.6bn capital expenditure programme over the next 7 years for Transnet with the following successes to date:

- Transnet invested in renewal, upgrade of rolling stock and accepted approximately 186 locomotives into operations from the inception of the MDS and 7 044 wagons were built in the same period – with an additional 1 300 new locomotives to be delivered over the next 3 years.

- maintaining and improving the financial sustainability of the Company with a stand-alone investment grade credit rating at one notch above the Sovereign's rating.
- the expansion of the Iron ore rail infrastructure to 60,0mtpa with the port capacity to 65,0mt was completed in September 2012.
- New Multi-Product Pipeline (NMPP) - The 24-inch trunk-line from Durban to Jameson Park was operationalised in January 2012 and is currently transporting diesel.
- successful second issuance of the Transnet Dollar Denominated Bond Maturing in year 2022 (TNUS 22 -July 2012) under the Global Medium – Term Note (GMTN) Programme at a coupon of 4%, Lowest ever 10-year US$ bond coupon and largest order book by a South African issuer;
- first SA Issuer to issue a Global ZAR bond (November 2013) in the international debt capital markets; and
- successful re-entry in the domestic debt capital markets with the issuance of the Transnet Bond Maturing in year 2030 (TN30) and Transnet Bond Maturing in year 2040 (TN40) under the Domestic Medium – Term Note (DMTN - September 2014).

Over the next seven years, the anticipated funding requirement amounts to R125.6bn, with the funding requirements relatively evenly spread over the next seven years by Transnet.

Transnet will continue to access the numerous funding sources established over time, such as the DMTN programme, GMTN programme, Export Credit Agency's (ECAs), Development Financial Institutions (DFIs) and financial institutions to explore alternative new sources ensuring that Transnet has diversified funding sources and sufficient liquidity available in challenging market conditions whilst still maintaining its investment grade credit rating (to the extent that this is within Transnet's control).

The majority of the MDS's investments will be in general freight and additional capacity across all other commodities. MDS is geared to improve rail connectivity ensuring that the port capacity will not be compromised by less than efficient railway operations.

The Authority is committed to its core strategy which is aligned to the MDS and Shareholder expectations. The Authority's total capital expenditure on MDS to date is R5.8bn with the following key successes:

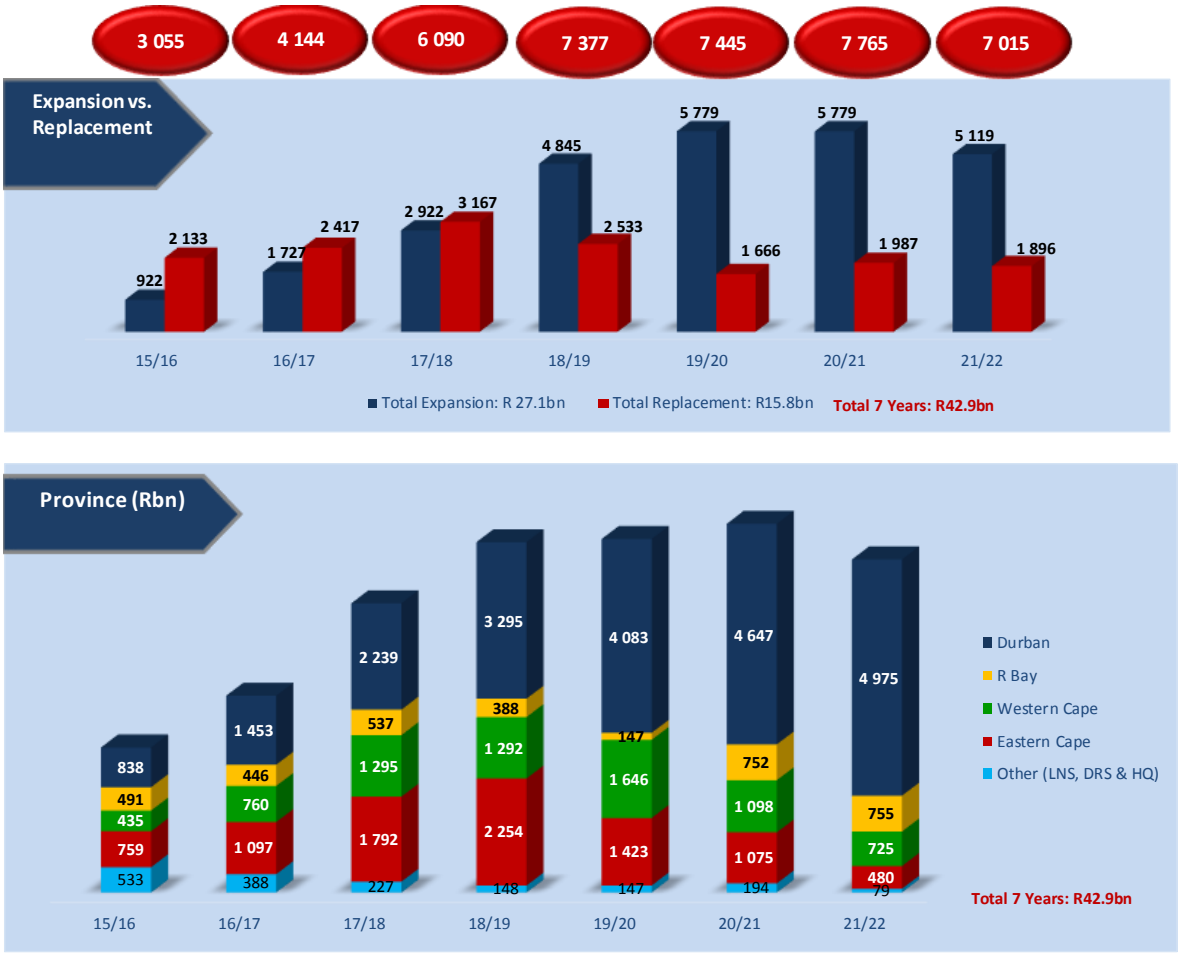
- The expansion of the Cape Town Container Terminal capacity from 0,9m TEUs to 1,5m TEUs was completed in December 2012.
- Phase 2A of the expansion of the Ngqura Container Terminal was completed in August 2012 creating 1,5m TEU's of additional capacity.
- Award of contract to local supplier for the delivery of 9 Tugs. First Tug delivery will be in FY 2015/16.
- Award of a contract for 5,500m^3 Trailer Suction Hopper Dredger (TSHD), planned delivery in 2015/16.
- Implementation of the pilot phase of the Integrated Port Management System (IPMS) to provide a strategic technology base towards the realisation of a "smart port".

The Authority's planned investment programme contributes R42.9bn (excluding the Durban Dig Out Port) to the Transnet MDS Capex programme. The key pillars of the Authority's core strategy, which are aimed at lowering the cost of doing business and driving growth in the economy, are as follows:

- Create and manage infrastructure capacity ahead of demand;
- Improving port efficiency through increased productivity and operations oversight; and
- To facilitate an integrated logistics chain that will establish the port system as an integrated gateway for trade.

The Authority's MDS Capex programme is illustrated in Diagram 1 as follows:

Diagram 1: MDS capex Spend



Operation Phakisa

The launch of Operation Phakisa by the State President (July 2014) resulted in an analysis of the economic potential of South Africa's oceans. Operation Phakisa aimed to assess how the oceans economy can contribute to increased GDP contribution and increased employment within the marine transport and manufacturing sector, aligned to the priorities of the National Development Plan. The recommendations highlighted that South Africa can achieve GDP growth and job creation by pursuing the development of new port repair facilities and to ensure that existing repair facilities are maintained to promote further growth in the vessel repair market. The recommendations from Operation Phakisa strongly underlined and supported the role of the Authority as set out in Section 11 of the Act, which indicates that the Authority must plan, provide, maintain and improve port infrastructure.

The recommendations of Operation Phakisa also demonstrated that growth within the oceans economy cannot be realised unless the proposed new port facilities are delivered as integrated industry solutions, with strong partnerships between the ports, IDZ's and the repair industry. Operation Phakisa will create opportunities for industry to invest and operate port facilities that will create capacity and unlock opportunities within the repair sector. One of the primary initiatives will be to establish dedicated port facilities to attract such opportunities within the Oil and Gas sector.

The Authority is committed to the delivery of Operation Phakisa. To deliver Operation Phakisa, new vessel repair facility opportunities will be pursued at the Ports of Saldanha, Richards Bay and East London, whilst maintenance and refurbishment of existing vessel repair facilities have been prioritised at the Ports of Durban, East London, Port Elizabeth, Mossel Bay and Cape Town. Further to this, boat building capabilities will be explored at the Port of East London.

The repair facilities to be established at the Port of Saldanha, aims to position the port as an offshore Oil and Gas services complex with dedicated rig and other vessel repair capabilities. Development will be aligned with the Saldanha Bay Industrial Development Zone (SBIDZ). The SBIDZ will likely attract companies that will provide land-based facilities to support offshore operations in terms of logistics, equipment servicing, rig repair and fabrication, as well as companies interested in dedicated infrastructure and quayside access for vessel fabrication, logistics and repairs.

Operation Phakisa will create opportunities for the private sector to invest in port facilities. The investment in new facilities will support both the oil and gas industry and expanding marine manufacturing within ports. The Authority will invest portion of the funds in the refurbishment of existing facilities within the ports and with the remainder being outsourced. The Authority's planned expenditure relating to Operation Phakisa is captured in this tariff application.

The Authority will follow a Section 56 process which requires bidders to respond to a Request for Proposal (RfP) with the process commencing initially with the Port of Saldanha for the outsourced funding.

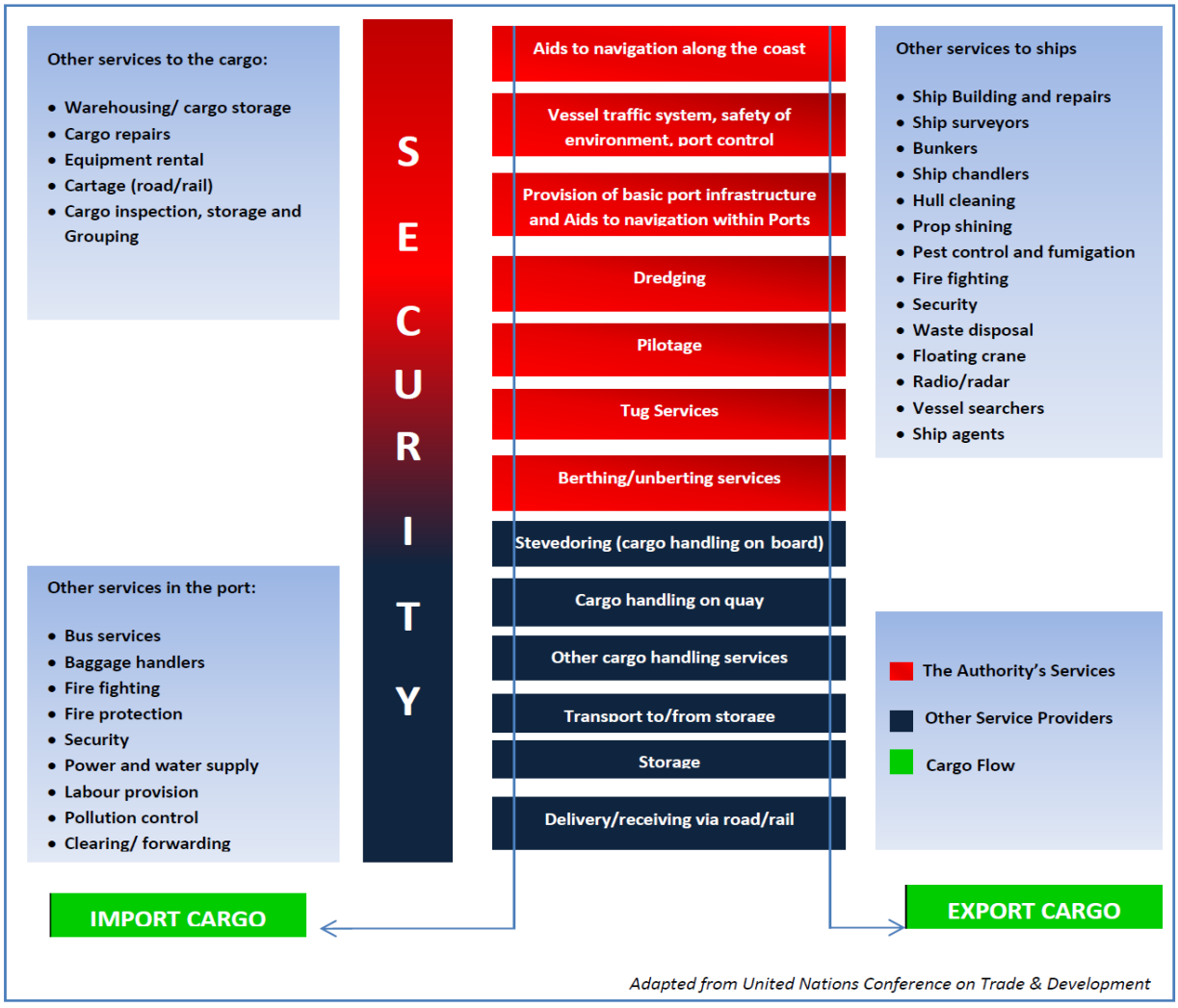
4.4 Tariffs in Perspective

The Authority, like any other port authority, needs to generate revenue by charging tariffs for the services that it renders, and to achieve the aforementioned MDS targets. The Authority may charge fees, in accordance with tariffs approved by the Regulator in order to fulfil the functions it must perform in terms of the Act.

As a landlord port authority, the Authority's core services, as specified in the Act, result in a number of revenue streams, which are utilised by the Authority to fulfil its responsibility for the safe, efficient and effective economic functioning of the national ports system.

There are various services provided within a port and **Diagram 2**: Various Port Services (adapted from the United Nations Conference on Trade and Development) illustrates the flow of cargo and ships through the port system:

Diagram 2: Various Port Services



The Authority's services at the ports can be divided into two basic groups:

- Basic port infrastructure; and
- Operational services to port users.

The Authority's services and their respective revenue streams are set out in the table below:

Table 6: The Authority's Services and Corresponding Revenue Streams

Port Infrastructure		Revenue Stream
Port land and terminals	Lease port land to terminal operators and other port service and port facility providers in the port(s).	Lease income (rentals)
Wet infrastructure	Lighthouse services infrastructure (lighthouses, buoys, beacons and electronic / radio navigation equipment) , port control and safety, entrance channels, breakwaters, turning basins, aids to navigation within port limits, vessel traffic services, maintenance dredging within ports.	Light dues, port dues, vessel traffic services fees
Dry infrastructure	Quay walls, roads, rail lines, buildings, fencing, port security, lighting (outside terminals), bulk services and in certain cases terminal infrastructure	Cargo dues, berth dues
Ship repair services	Provide and maintain ship repair facilities	Preparation fee, docking and undocking fees (vessels at repair facilities), berth dues (vessels at repair quays)
Marine services	Pilotage, tug assistance, berthing, running of lines, floating cranes	Pilotage dues, tug assistance fees, berthing fees, running of line fees, floating crane hire fees

In the context of the South African ports system and the Act, the revenue generated from the Authority's services is utilised inter alia to:

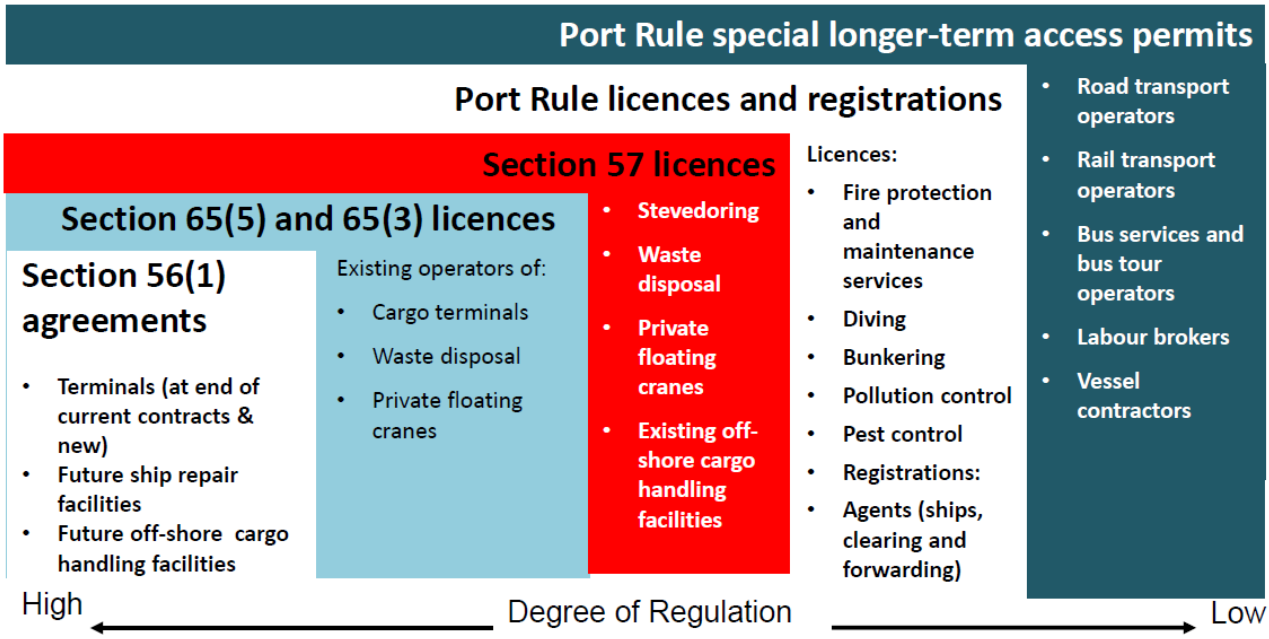
- maintain basic port infrastructure;
- provide future port infrastructure;
- maintain and provide the current and future marine fleet; and
- maintain and provide current and future ship repair facilities

This makes the South African port system distinct from most ports internationally, where typically, some port capital costs are funded through State or Municipal budgets. The Authority's Tariff Book sets out the various tariffs that are charged by the Authority to maintain and develop the South African port system (Refer to ***Annexure A***).

Apart from the services that the Authority itself renders, the Authority is also the controller of port services and facilities that are provided by others in the ports. The Authority exercises such control in accordance

with the provisions of the Act, by means of agreements, licences and permits. The Act and Port Rules issued by the Authority in terms of section 80(2) of the Act and the Authority's Guidelines of Agreements, Licences and Permits (25 April 2008), specify the degree of regulation that is being exercised in this regard. The type of regulation is illustrated in the **Diagram 3** that follows:

Diagram 3: Types of Regulation



Section 73(1) (c) and (d) provides that the Authority may charge fees for the granting of concessions and licences and for any services provided by the Authority in the performance of its functions.

5. Port Infrastructure Development Plan and Capital Expenditure

Section 11(1) of the Ports Act lists the main functions of the Authority, amongst others, the responsibilities with respect to the provision of port infrastructure:

5.1 Port Investment planning

"**Functions of the Authority"**

11. (1) *the main function of the Authority is to own, manage, control and administer ports to ensure their efficient and economic functioning, and in doing so the Authority must:*

(a) plan, provide, maintain and improve port infrastructure;

(b) prepare and periodically update a port development framework plan for each port, which must reflect the Authority's policy for port development and land use within such port;

(c) *control land use within ports, and has the power to lease land under such conditions as the Authority may determine;*

(d) *provide or arrange for road and rail access within ports;*

(e) *arrange for such services such as water, light, power and sewerage and telecommunications within ports;*

(f) *Maintain the sustainability of the ports and their surroundings;*

5.2 The Authority's Capital Investment Progamme

The Authority's investment spending is primarily influenced by its detailed strategic initiatives which aim at providing adequate port infrastructure ahead of demand, improve vessel and cargo turnaround; and improve the productive use of assets.

In developing the capex plans, the following activities are considered by the Authority:

- ***Long-term Framework Plans***: The Authority prepares a National Ports Plan on an annual basis which includes the individual Port Development Framework Plans. These Plans outline the proposed investments across the ports to create capacity to meet anticipated demand. The latest version available is the National Ports Plan (NPP) 2015. The NPP 2015 informs the ports Chapter of Transnet's Long Term Planning Framework (LTPF).
- ***Capacity studies***: The Authority uses a robust simulation tool to assess the capacity of current infrastructure and to simulate future infrastructure capacity. The capacity studies are updated annually.
- ***Volume Studies***: The forecasted volumes used in the Authority's development plans are based on the Transnet Corporate Plan for the short-term investment guidelines. The long-term investment guidelines use the forecasted volumes from Transnet's Freight Demand Model, which provides the volume studies for all Transnet Operating Divisions. The Transnet Freight Demand Model is a demand forecasting tool developed and utilised in association with the University of Stellenbosch.
- ***Prioritization:*** Development projects are prioritized by safety; and secondly to meet demand forecasted.
- ***Interaction with Transnet***: The Authority maintains close interaction with Transnet Planning; Transnet Commercial and Transnet Capital Integration during the planning cycle and the development research process. The plan developed by the Authority is incorporated into the Transnet Plans.
- ***Port Consultative Committees (PCC's) & National Port Consultative Committees (NPCC's***): The Authority adopts a consultative approach to the drafting of the Port Development Framework Plans and the execution of the resultant Capital Investment Plan. Port Development Framework Plans projected for the short, medium and long term as well as the current and 5 year Capital Investment Plans have been consulted with port users. This consultation was conducted on a port-by-port basis during a process facilitated by the Department of Transport (DoT) in May and June 2015 with the South African Maritime Safety Association (SAMSA) as secretariat. In addition, the aforementioned Port Development Framework Plans and Capital Investment Plans are consulted per port at each

PCC as well as at the NPCC's. These plans are informed by the aforementioned Transnet Freight Demand Model (developed by the University of Stellenbosch). The model was presented to the NPCC at a workshop held in June 2015 to ensure that these plans are understood by port users.

The following initiatives of the Authority are aimed at supporting the MDS and volume growth:

- improve management and delivery of capital projects;
- ensure compliance to Project Lifecycle Process (PLP) model;
- tracking of capital projects delivery by the Enterprise Programme Management Office (EPMO);
- improve capital planning and budgeting processes;
- improve procurement process to reduce turnaround time;
- ensure disciplined execution of the capital and maintenance programmes;
- implement integrated commercial management and integrated capacity planning processes with a total supply chain focus to improve customer service and achieve wider integration of the port system;
- increase focus on business development; and
- improve land and other asset utilization.

The table below (Strategic Capital Investment Objectives) illustrates projections for the current financial year (FY 2015/16) as well the tariff period under review (FY 2016/17 to FY 2018/19) which has been included as part of RAB in the Revenue Requirement.

Table 7: Strategic Capital Investment Objectives

Strategic objective	Details	LE	Projections		
		2015/16	2016/17	2017/18	2018/19
		Rm			
Re-engineering, Integration, Productivity and Efficiency	To maximise return on investments by obtaining additional volumes	618	1 241	2 673	4 422
	To maximise return on investments by improving operating efficiencies	599	962	363	142
	To preserve current revenue streams without obtaining additional volumes (ie. revenue protection)	1 083	1 348	2 170	1 979
Safety, Risk and Effective Governance	Ensure Safety Optimisation	612	364	583	617
	Optimise Business Enterprise Offerings	69	126	172	112
	Optimally Satisfy Social Investments (non economic value creating projects)	-	10	17	30
	Environmental	45	44	24	8
Human Capital	Optimise Human Resources	30	50	88	69
Total (excl. borrowing cost)		**3 055**	**4 144**	**6 090**	**7 377**

The detailed capital expenditure schedule is highlighted in ***Annexure B***.

6. The Authority's Total Revenue

6.1 Real Estate Revenue

The Authority has positioned itself as a landlord port authority, managing all fixed assets under its control in a responsible and productive manner.

Real Estate Management is driven by key principles that seek to support the vision of creating a world-class port system in South Africa, that supports the development goals of our country and the region as a conduit for import and export trade between South Africa and the world. The Authority leases out land to achieve optimum productivity within the ports.

Third party tenants enter into short/long term leases to enable them to invest and develop facilities for their operations. Rentals are negotiated on a case by case basis and are therefore not reflected in the Authority's Tariff Book.

The salient details of the Authority's Real Estate portfolio are summarized in Table 8 below to give a consolidated overview of the portfolio.

Table 8: Real Estate Salient Features

Salient Features of Real Estate Business	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19
	Current Tariff Year	Fixed Tariff Year	Indicative Tariff Years	
Number of Ports	9	9	9	9
Gross Lettable Area	Approx 27 million sqm	Approx 27 million sqm	Approx 27 million sqm	Approx 27 million sqm
Number of Tenants	755	765	775	775
Total No. of Terminal Operators	90	90	90	90
Vacancy factor including Unserviced/Unused land	20%	20%	20%	20%
Vacancy factor excluding Unserviced/Unused land	7.5%	6.0%	5.0%	5.0%
Average term of Leases	5 - 25 Years	5 - 25 Years	5 - 25 Years	5 - 25 Years
Estimated Revenue (Current Financial Year)	**R2 407 m**	**R2 600 m**	**R2 874 m**	**R3 147 m**
Estimated Revenue (Subsequent Financial Year)	R2 600 m	R2 874 m	R3 147 m	R3 465 m
Forecast Revenue Growth	R193m	R274 m	R273 m	R318 m

The Real Estate business by nature of it being contract driven is not subject to a tariff increase but is taken into consideration for the determination of the Authority's allowable revenue. This business is driven by a set of functions which are set out in the Act. In line with the Act the Authority must:

- control land use within ports and has the power to lease land under such condition as it may determine;
- ensure that adequate, affordable and efficient port service and facilities are provided;
- exercise licencing and controlling functions in respect of port services and port facilities to be able to perform efficiently;
- ensure that any person required to render any port services and port facilities is able to perform efficiently; and

- promote the achievement of equality by measures designed to advance persons or categories of persons historically disadvantaged by unfair discrimination in the operation of facilities in the ports environment.

Further to the above, in terms of Section 11 (r) of the Act, the Authority must promote greater representivity, in particular to increase participation in terminal operations of historically disadvantaged persons. In order to achieve compliance with the Act, the Authority has considered measures to achieve 75% of Level 4 B-BBEE status in lease contracts.

6.2 Marine Business Revenue

The Authority generates revenue by providing services to port users, which include terminal operators, shipping lines, ship agents, cargo owners and the clearing and forwarding industry. Port Infrastructure and maritime services are provided by the Authority for the five commodity categories namely; containers, dry bulk, liquid bulk, break-bulk and automotives. The main source of revenue is the tariffs which are charged by the Authority for providing the aforementioned services with approval by the Regulator. In determining the tariffs of the Authority consideration is given to the forecasted volume growth which is influenced by the economic outlook.

6.2.1 The Authority's Volumes

The volumes of the Authority are mainly driven by ***Cargo*** and ***Marine services***.

The annual and forthcoming yearly projections for the Authority's volume budget process usually commence in October and spans until the Transnet Board approves the budgets in February of the following year.

The budget process generally gives an indication of the current year's performance (Latest Estimates); the following year's volumes (budget period) and the forecast for the next six years. This in essence allows Transnet to plan its goals for the short to medium term and determine its profitability over the period.

The volumes budget compilation follows a bottom-up approach, commencing with the Authority's Key Account Managers (KAM's) at port level communicating and liaising with customers concerning their operational and strategic plans and how this translates into volume forecasts for the six year period. The KAM's also liaise with all Port Terminals operating within their Ports for alignment purposes and will then consolidate at Port Level for all different cargo categories and forward to Head Office for consolidation. During the budget evaluation process that follows various key factors such as historic, prevailing and anticipated future market conditions, operational efficiencies, and infrastructure capacity levels and anticipated improvements through-out the value chain are considered in order to validate the reasonableness of commodity volume projections over the period.

Transnet has also implemented periodic volume validation exercises which entail a formal interaction platform with key customers to validate customer volume forecasts. All divisions of Transnet participate in these volume validation exercises, with the objective of integrated and synchronised volume planning through the entire commodity value chain.

6.3 Cargo

Growth in cargo volumes through the port system is driven largely by both local and global demand and supply. The Authority has various categories of cargo that traverse port infrastructure and therefore generate revenue in the form of cargo dues. Cargo types are categorised according to the manner in which they are handled.

These cargo types are further differentiated between imports, exports, coastwise and transhipments.

- Imports are classified as cargo emanating from an international destination destined for South African Ports
- Exports are cargo shipped from any South African port destined for an international destination.
- Coastwise cargo is cargo emanating from within the borders of South Africa shipped from one South African port and destined to another South African port.
- Transhipment cargo is cargo emanating from an international source destined for another international destination (except South Africa), which is handled at a South African port. This cargo could be termed “cargo in transit”.

The Authority's actual volumes for FY 2014/15 together with budgeted volumes for FY 2015/16 together with the volume projections and growth for FY 2016/17 to FY 2018/19 differentiated into the various cargo types are highlighted in the table below.

Table 9: Authority's Volume Growth

Details	Actual FY 2014/15	Latest Estimate FY 2015/16	% Deviation	Forecast FY 2016/17	% Deviation	Forecast FY 2017/18	% Deviation	Forecast FY 2018/19	% Deviation
Containers (TEUs)									
Deepsea Full: Imports	1 434 668	1 435 055	0%	1 484 081	3%	1 530 332	3%	1 573 909	3%
Deepsea Full: Exports	1 083 534	1 194 146	9%	1 234 759	3%	1 273 382	3%	1 310 562	3%
Transhipments	1 102 705	1 163 635	5%	1 241 143	6%	1 319 431	6%	1 372 385	4%
Other	1 078 258	1 111 777	3%	1 149 835	3%	1 187 084	3%	1 217 660	3%
Total	***4 699 165***	***4 904 613***	***4%***	***5 109 818***	***4%***	***5 310 229***	***4%***	***5 474 516***	***3%***
Vehicles (Units)									
Vehicle: Imports	359 948	391 443	8%	409 250	4%	448 514	9%	471 531	5%
Vehicle: Exports	265 989	252 051	-6%	263 832	4%	276 450	5%	288 931	4%
Other	42 384	6 728	-530%	7 091	5%	7 481	5%	7 870	5%
Total	***668 321***	***650 222***	***-3%***	***680 173***	***4%***	***732 445***	***7%***	***768 332***	***5%***
Break Bulk (Metric Tons)									
Break Bulk : Imports	3 212 736	2 454 546	-31%	2 452 233	0%	2 506 353	2%	2 580 588	3%
Break Bulk: Exports	5 967 281	6 037 746	1%	6 509 241	7%	6 727 398	3%	6 955 172	3%
Other	281 312	88 495	-218%	92 284	4%	92 389	0%	92 464	0%
Total	***9 461 329***	***8 580 787***	***-10%***	***9 053 758***	***5%***	***9 326 140***	***3%***	***9 628 224***	***3%***
Dry Bulk (Metric Tons)									
Coal Exports	78 188 933	77 040 000	-1%	80 998 000	5%	87 007 880	7%	90 980 353	4%
Iro Ore Exports	57 200 167	60 500 000	5%	60 500 000	0%	60 500 000	0%	60 500 000	0%
Manganese Ore Exports	10 677 828	10 200 000	-5%	10 300 000	1%	10 300 000	0%	10 300 000	0%
Other Dry Bulk	25 540 921	23 529 419	-9%	28 255 002	17%	30 461 661	7%	31 483 851	3%
Total	***171 607 849***	***171 269 419***	***0%***	***180 053 002***	***5%***	***188 269 541***	***4%***	***193 264 204***	***3%***
Liquid Bulk (kl)									
Petroleum	39 503 989	33 357 603	-18%	34 533 102	3%	35 378 596	2%	36 907 557	4%
Chemicals	2 179 697	2 226 465	2%	2 256 856	1%	2 321 286	3%	2 381 964	3%
Other Liquid bulk	1 101 262	1 190 972	8%	1 194 605	0%	1 205 344	1%	1 354 237	11%
Total	***42 784 948***	***36 775 040***	***-16%***	***37 984 563***	***3%***	***38 905 226***	***2%***	***40 643 758***	***4%***

6.3.1 Containers

The volume projection for the South African port system is estimated at approximately 5.1m Twenty-foot Equivalent Units (TEUs) for FY 2016/17. This results in a projected annual average growth rate of 4% for the FY 2016/17.

The global container industry had shown resilience since 2013. The domestic container sector in line with the global container movements has weakened. This is a direct reflection of the deteriorating domestic economic activity and consumption as well as economic activity in South Africa's main trading partners. Drewry forecasts container volumes across Africa to grow by 4.5% in 2015 from a 3.4% growth rate in 2014, with the Authority's own volume forecasts indicating a 3.66% for South African ports over the tariff period.

The container sector volumes is envisaged to reflect a subdued domestic economic outlook in the medium-term particularly due to the low domestic manufacturing activity. Manufacturing sector posted zero growth

during 2014 having grown by 1.9% and 0.7% during 2012 and 2013, respectively. Imports in input materials for manufacturing purposes have remained low. Household consumption (i.e. retail sector) remains subdued due to lower consumer confidence with rising inflation, low income growth, tight credit conditions and persistently high unemployment levels. A sharp decline in the retail sector consumption has a direct impact on the volumes of container imports (i.e. 0% increase in Deepsea full imports between FY 2014/15 and FY 2015/16).

Other factors that have negatively influenced container volumes are highlighted below:

- subsiding trade activity between South Africa and its major trading partners being particularly the Euro area and China. China is forecasted to grow by less than 7% during 2015, which poses significant risks to container volumes;
- the Euro area's economic prospects also remains muted such that trade with South Africa will remain depressed for some time. South-South trades, which have been significant in the recent past, where emerging markets and developing economies have been driving global trade, seem to be changing. These economies have been slowing down from about 5% real growth recorded during 2013 to 4.3% growth expected during 2015. The overall impact of this economic slowdown is likely to be greater than the strengthening of other major export trading partners such as Germany, United States of America (USA) and the United Kingdom (UK);
- South Africa's own peculiar challenges such as electricity rationing and a weak exchange rate rendering the imports of manufacturing components expensive; and
- declining commodity prices, increasing fuel prices and overall rising input costs has led to major industries scaling down production.

Despite subdued growth in container volumes (due to the reasons above) there remain elements that contribute to growth, as detailed below:

- positive global economic prospects should further stimulate demand for domestic manufactured products thus supporting a moderate increase in containerized exports and also imports of inputs into the manufacturing and production process;
- increase in reefer shipping particularly of the agricultural products exported to Europe, USA and Asia;
- additional cargo handling equipment capacity to be deployed in the next two and a half years will allow increased transshipments at the Port of Ngqura, coupled with tariff incentives aimed at promoting transshipments through the SA port system;
- the switch in mode of transport from RoRo's to containers;
- the containerization of dry bulk; and
- increase in Transhipment cargo.

The current declining Chinese economy poses a short term threat which if the trend continues, will become a medium term threat as the country is one of SA's biggest trading partners. Labour unrest remains a real threat which can impact volumes intermittently, along with fuel prices, electricity supply disruptions and market/industry protectionism.

6.3.2 Automotives

According to current global production signals, the automotive industry is returning to pre-2009 annual growth of around 4%. Even with tumbling markets in some BRICS countries, poor profitability among European players and excessive profitability in Chine (i.e. which is likely to be corrected by the markets) the Automotive sector outlook is positive. The outlook of South Africa's main trading partners (UK & USA) indicates the recovery in automotive production. The Authority's automotive volumes for FY 2015/16 are expected to decline by 3% compared to the previous year, with a slight improvement in FY 2016/17 and an average annual growth rate of approximately 5% over the 3 year period ending March 2019.

The main risk to the domestic auto manufacturing is the continued power supply disruptions amongst other economic factors. The bulk of South African automotive exports are destined for Australia, Europe, Africa, Asia and North America. With the positive global economic outlook on the automotive industry, particularly the United States and Europe, during FY 2016/17 the export volume growth is expected to stabilize at approximately 4%.

The following factors further support growth in the export automotives:

- Government's proposed Medium and Heavy Commercial Vehicle Automotive Investment Scheme (MHSC-AIS) together with the Automotive Production and Development Programme (APDP) incentive should continue to boost the auto industry thereby increasing export volumes;
- FAW Vehicle Manufacturers South Africa (FAW SA) has started the production of truck and tipper bodies at a new body shop facility, located in the Eastern Cape and they estimate that 60% of the production will be exported, which should support automotive export volumes;
- The Department of Trade and Industry's (DTI) incentive namely APDP has been extended to among others, Ford Motor Company of Southern Africa (FMCSA) to boost its manufacturing competiveness against rival manufacturers in countries such as Thailand and Brazil. The incentive programme allowed FMCSA to maximise its production capacity and export two-thirds of its locally produced vehicles to about 140 countries, enabling it to develop a significant export base and offset its geographical disadvantage;
- Volkswagen South Africa (VWSA) expects the recent launch of its new model called "UP" to close a gap in the entry-level market. VWSA is targeting "UP" sales of around 250-300 units per month. Some of these units might be exported to other markets.

MAN Truck & Bus South Africa (MTBSA), has unveiled a grid-connected solar photovoltaic rooftop system at its assembly plant in Durban. The 580 kW, 2,320-panel system can generate up to 810,000 kWh annually, and is also capable of supplying additional energy to the eThekwini metropolitan grid. The system will allow the company to operate even during periods of power outages. This implies that MTBSA will be able to meet its production requirements both for the domestic market and for export destinations. Thus no deviation is expected against the forecasted MAN volumes passing through the ports. However, MAN expects flat sales for 2015, due to lack of funding in the bus market.

6.3.3 Coal

Coal exports are expected to grow by an annual average rate of 5.3% over the 3 year period ending March 2019. The decrease in volumes from FY 2014/15 to FY 2015/16 is mainly driven by the oversupply in the market. Declining coal prices also adversely affected producer margins, which resulted in elevated port inventory levels instead of higher export volumes. The coal market remains vulnerable to global economic recovery and performance especially from our trading partners such as China. The declining price trend is expected to continue on the back of the flat growth rates.

The weakening Chinese economy does not support the export coal market. China's economic growth has traditionally relied on large investment projects and heavy industries which fueled demand for coal. The increased use of natural gas in particular amid efforts to curb air pollution, efficiency advancements in coal conversion technology and low capacity utilisation rates for coal fired power stations (from 60% in 2011 to 56% in 2014) suggest that China's coal consumption is on a decline.

By contrast, India and Japan are expected to increase their reliance on coal imports which may support the global coal seaborne market.

Competition for export volumes could come from South Africa's own domestic consumption as more coal production may be diverted towards Eskom new coal power stations (i.e. Medupi, Kusile) as well as any other existing power stations due for coal contract extensions. While this may offer short-term relief for some domestic producers given the weak global demand environment, Eskom requires long-term agreements which may be more punitive in the medium-term given the low domestic coal price and it would be difficult to divert production back to the export market once global demand recovers. Further, the response to climate change in efforts to reduce carbon emissions mean alternative fuel sources are likely to be promoted at the expense of coal.

6.3.4 Iron Ore

A rapid increase in the global supply market of iron ore, combined with moderate demand growth in China, resulted in the price falling nearly 50% in 2014. Iron Ore volumes reflect an increase of 5% for FY 2015/16 and remain stagnant for the subsequent three years ending March 2019 and is mainly due to the port air emissions license conditions.

The Port of Saldanha is the dedicated port for iron ore exports with a capacity of 58.5 million tons per annum (Mtpa). The Multipurpose Terminal at the port will also handle Iron Ore volumes in order to alleviate some of the pressure on the Bulk Terminal in Saldanha. While channel capacity expansion plans are in progress, iron ore volumes will however remain flat over the forecast period until such time as the expansion is complete.

6.3.5 Manganese Ore

Manganese ore volumes are anticipated to decrease by 5% for 2015/16; increase by only 1% for 2016/17 and remain static for the following three years mainly due to infrastructure capacity constraints. The Port of Port Elizabeth (PE) is the primary exporter of manganese with a capacity of 4.9Mtpa. The Port of PE is capped at 4.9Mtpa as a result of ageing cargo handling equipment. Other ports which handle manganese in the interim are the Port of Durban, with an estimated capacity of 2Mtpa, as well as the Port of Saldanha

(MPT) with an estimated capacity of 1.6Mtpa. This interim capacity at Durban and Saldanha has been made available due to the decommissioning of the PE Bulk Terminal in 2019. The current capacity which is in the region of 8.5Mtpa on all the manganese channels combined, does not meet the current demand from the South African exporters.

The relocation of the Manganese Terminal from Port Elizabeth to Port of Ngqura should substantially increase capacity from 8.5Mtpa to 16Mtpa by FY 2019/20, with the first ore expected at the newly commissioned terminal during February 2019. The decommissioning of the Port Elizabeth Bulk Terminal is earmarked for August 2019.

6.3.6 Liquid Bulk

Fluctuating oil prices on a global scale is one of the liquid bulk industry's main and most disruptive issues. OPEC is controlling 40% of the world's supply of oil and it sets the production levels necessary to meet global demand. The price fell from a peak of above $100 a barrel to below $50 a barrel in the current year. In essence the fall in oil prices was due to a lower demand for oil in Europe and China, coupled with a steady over supply of oil from OPEC. This resulted in an excess supply of oil causing oil prices to fall sharply.

Growth in the South African liquid bulk volumes have remained relatively flat with annual volume demands fluctuating between 36 million kiloliters (m kl) and 42m kl in the recent past.

The lower GDP growth over the period has resulted in lower demand for liquid bulk products. The continuing large-scale switching from petrol to diesel-powered motor vehicles is one of the factors contributing to slower growth in demand, as one of the benefits of diesel is a lower consumption rate per operating hour. In addition, storage capacity is limited which affects imports of finished products. Thus, even at low energy prices, imports will always be limited to the storage capacity. In addition, the increased import volumes of liquid bulk should also be driven by economic activity. Thus, investment in the industry appears restricted due to limited profitability of existing refineries with operators citing low returns on investment as well as a lack of clarity on relevant regulations as reasons for their reluctance to upgrade or expand their facilities.

Furthermore, a continuing commercial risk to the industry and the country as a whole considering that SA is a net importer of crude oil is the instability in the international crude prices which is an important consideration for production and supply. Overall, the industry continues to experience low demand conditions and volatile rand exchange rate that has led to declining margins. The export of chemicals is largely affected by global market conditions and the state of European economies in particular, and this major market for South African exports is forecasted to be positive in FY 2015/16.

6.3.7 Marine Services

Marine volumes comprise of the number of ships arriving at South African ports and their associated Gross Registered Tonnage (GRT). The size of the vessel and the number of days spent in the port dictates the amount that shipping lines will pay for utilising basic port infrastructure and marine services operational charges, i.e. tugs, berthing and pilot assistance.

The vessel traffic/ calls is demand driven as it dependents on growth in volumes per cargo commodity. Based on the current economic outlook, the Authority projects approximately the same number of vessels

arriving at the Ports as shipping lines continue to utilize larger vessels and consolidate cargo volumes to reduce costs. Furthermore, these vessels are in turn sailing over longer routes. As a result there is subdued growth in the number of the vessels arriving at the Authority's ports.

7. Tariff Application Approach

The tariff application for FY 2016/17 has been prepared in accordance with the approved Tariff Methodology issued by the Regulator. The section that follows illustrates the application of the components of the Tariff Methodology.

7.1 Revenue Requirement Formula

The Revenue Requirement (RR) approach as per the Tariff Methodology for FY 2015/16 to FY 2017/18 forms the basis upon which the Regulator will determine the appropriate revenues for the Authority. The formula as prescribed is as follows:

Revenue Requirement

= Regulatory Asset Base (RAB) x Weighted Average Cost of Capital (WACC)

+ Operating Costs + Depreciation + Taxation Expense ±Claw-back

± Excessive Tariff Increase Margin Credit (ETIMC)

The application of this formula is demonstrated in the sections that follow.

7.1.1 Regulatory Asset Base

The Authority is responsible for the management of the South African national ports system and owns, develops and maintains port land infrastructure.

7.1.1.1 ***Asset Base***

The RAB on which the Authority is allowed to earn a return on by the Regulator involves all assets of the Authority. The Regulator retains the discretion to disallow any portion of the RAB as it deems necessary such as assets that fall outside the ambit of the National Ports Act.

The RAB of the Authority has been trended using the latest inflation forecast from National Treasury per the Regulatory Manual.

The process used to determine the RAB is as follows:

a) In order to determine the value of the RAB on which a return will be calculated in the allowed revenue formula, both the closing and opening values of the RAB including capital expenditure are averaged throughout the period. This is done to recognise availability and incurrence of capital expenditure throughout the financial year rather than on the first day of the financial year.

b) The formula for the determination of the value to be allowed in the RAB for the tariff period is highlighted in Section 3.3 (subsection 3.3.4) above.

Properties Outside of Port Limits

Section 11 (1) of the National Ports Act, 2005 (Act No 12. Of 2005) states that:

"The main function of the Authority is to own, manage, control and administer ports to ensure their efficient and economic functioning, and in doing so the Authority must-

*(c) control land use **within ports**, and has the power to lease land under such conditions as the Authority may determine."*

The phrase "**within ports"** is interpreted by Transnet to exclude any land that falls outside the co-ordinates as stipulated in the Regulations (the port limits). Transnet Properties (TP), a unit within Transnet which is responsible for the handling of all Transnet Properties considered as non-core to the operating divisions. Based on the Transnet interpretation of the Act, and to ensure that the RAB reflects only qualifying assets, assets identified as properties outside of port limits with a trended value of R489m will be transferred to TP and excluded from the RAB. Land associated to the DIA site for the Durban Dig Out Port (DDOP) has also been transferred as at 31 March 2015 as the aforementioned port is yet to be promulgated.

The RR associated with the properties outside of port limits for FY 2014/15 and FY 2015/16 is highlighted in Table 10 below:

Table 10: RR related to properties outside of port limits

Revenue Requirement: Properties Outside of Port Limits		
Details	**FY 2014/15**	**FY 2015/16**
RAB (R'm)	*476*	*489*
Vanilla WACC (%)	*5.48%*	*6.38%*
Return on Capital (R'm)	26	31
Plus: Depreciation (R'm)	12	13
Plus: Operating Costs (R'm)	1	1
Plus: Taxation Expense (R'm)	7	7
Plus/Less: Clawback (R'm)	-	-
Revenue (R'm)	**46**	**52**

The lease income derived from the aforementioned properties approximates to the revenue requirement. Therefore the transfer of these properties and the associated income will have a neutral effect on the Authority. This means that the Authority will remain revenue neutral after the removal of these properties from the RAB as demonstrated in Table 11 below for FY 2014/15 and FY 2015/16:

Table 11: RR vs. Lease Income for properties outside of port limits

Details	FY 2014/15	FY 2015/16
Real Estate Lease Income (R'm)	46	50
Required Revenues: Properties Outside of Port Limits (R'm)	46	52
Difference (R'm)	**0**	**(2)**

*7.1.1.2 **Depreciation***

- *Financial Reporting*

In terms on financial reporting, the Authority's Depreciation is recognised on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment. Land and assets in the course of construction are not depreciated. All other property, plant and equipment, including capitalised leased assets, are depreciated on a straight-line basis over their estimated useful lives or the term of the lease, if shorter. Major repairs and overhauls are depreciated over the remaining useful life of the related asset or to the date of the next major repair or overhaul, whichever is shorter. Depreciation commences when the asset is available for use. Assets are depreciated over the following periods:

Table 12: Abstract of Depreciation Policy

SIGNIFICANT ACCOUNTING POLICIES	
PROPERTY, PLANT AND EQUIPMENT	
Asset class	**Years**
Buildings and structures	10 – 50
Buildings and structures components	10 – 25
Permanent way and works	3 – 95
Aircraft including components	5 – 8
Port infrastructure	12 – 100
Floating craft including components	5 – 40
Containers	10 – 20
Vehicles	3 – 15
Machinery, equipment and furniture	3 – 30

- *Tariff Application*

In accordance with the Tariff Methodology, the RAB will be depreciated on a straight line, 40 year basis on the trended/inflated asset base. Furthermore, 50% of the capex that is included in the RAB is inflated in determining depreciation. The resultant depreciation is R1 928m for FY 2016/17, R2 117m for FY 2017/18 and R2 355m for FY 2018/19.

7.1.1.3 Inflation Trending

The Tariff Methodology prescribes the use of the Consumer Price Index (CPI) for the tariff period based on the latest forecast published by the National Treasury or alternatively the BER inflation forecast for the purposes of trending the RAB. The Authority has utilised the latest forecasts published by National Treasury (Source: Budget Review (Economic Outlook: Chapter 2).

7.1.1.4 Capital Works in Progress(CWIP)/ Capital Expenditure (Capex)

The formula for determination of the RAB includes CWIP/Capex. Capex refers to assets that are under construction. Capex is informed by the Capex program which is forecasted at R4 144m for FY 2016/17, R6 090m for FY 2017/18 and R7 377m for FY 2018/19. Detailed information relating to capital expenditure is demonstrated in ***Annexure B: Capital Expenditure***.

7.1.1.5 Working Capital

Working Capital in accordance with the Tariff Methodology is determined as follows:

Table 13: Working Capital

Indexation as per Regulatory Manual	AFS 2014/15	Indexation	FY 2015/16 Rm'	Indexation	FY 2016/17 Rm'	Indexation	FY 2017/18 Rm'	Indexation	FY 2018/19 Rm'
Current Assets	**2 766**		**2 885**		**2 955**		**3 050**		**3 130**
Trade Receivables	2 729	4.30%	2 846	2.40%	2 914	3.20%	3 007	2.60%	3 085
Inventories	37	4.80%	39	5.90%	41	5.70%	43	5.70%	45
Current Liabilities	**3 290**		**3 461**		**3 768**		**4 161**		**4 504**
Trade Payables	2 406	4.80%	2 521	5.90%	2 670	5.70%	2 822	5.70%	2 983
Current Tax Liability	884	4.80%	926	5.90%	981	5.70%	1 037	5.70%	1 096
Capex Payables			14		117		302		425
Working Capital	**(524)**		**(576)**		**(813)**		**(1 111)**		**(1 374)**

Notes:

Trade Receivables indexed by Volume Growth on a cumulative basis

All other components indexed by inflation on a cumulative basis

Capex Payables is the difference between the tariff year under review and actual capex for FY 2013/14. (The difference is divided by 12 months plus VAT at 14%)

7.1.2 Weighted Average Cost of Capital

The key components used to determine the Vanilla WACC is highlighted in the table that follows:

Table 14: Weighted Average Cost of Capital (WACC)

Details	FY 2016/17 Fixed Tariff Year	FY 2017/18 Indicative Tariff Years	FY 2018/19 Indicative Tariff Years
Risk Free rate (nominal)	8.26%	8.17%	8.16%
Real risk free rate	*2.23%*	*2.34%*	*2.33%*
MRP	5.40%	5.40%	5.40%
Asset Beta	0.50	0.50	0.50
Equity Beta (Using Hamada)	0.86	0.86	0.86
Gearing	50%	50%	50%
WACD (nominal)	9.87%	10.07%	10.22%
Inflation	5.90%	5.70%	5.70%
Tax rate	28.00%	28.00%	28.00%
Cost of Equity (real)	6.87%	6.98%	6.97%
WACD (real, pre-tax)	3.75%	4.13%	4.28%
Vanilla WACC	**5.31%**	**5.56%**	**5.63%**

Explanatory Notes:

- *Risk Free Rate: Calculated over a five year monthly average from June 2010 to May 2015 for FY 2016/17.*
- *MRP: Geometric mean with the use of the DMS dataset over a full 113 year period.*
- *Inflation: Latest National Treasury (NT) forecasts used for FY 2016/17 & FY 2017/18. NT forecast not available for FY 2018/19 therefore maintained inflation rate of FY 2017/18*
- *Cost of Debt: Transnet Weighed Average Cost of Debt*
- *FY 2017/18 & FY 2018/19: The MRP for FY 2015/16 is used as a proxy to determine an indicative WACC as this index is based on historical data*

7.1.3 Valuation of the RAB

The valuation of the RAB is highlighted in Table 15 as follows:

Table 15: Regulatory Asset Base

Details	FY 2016/17 Fixed Tariff Year	FY 2017/18 Indicative Tariff Years	FY 2018/19 Indicative Tariff Years
	R'm		
Opening Net Book Value	71 342	77 249	85 625
Less: Properties Outside of Port Limits	(489)	-	-
Restated NBV	70 853	77 249	85 625
NBV Inflated	75 033	81 652	90 506
Less: Depreciation	(1 928)	(2 117)	(2 355)
Add: Capex	4 144	6 090	7 377
Closing NBV	77 249	85 625	95 528
Average Opening and Closing	74 296	81 437	90 577
Less: Working Capital	(813)	(1 111)	(1 374)
RAB Final	**73 483**	**80 326**	**89 203**

7.1.4 Taxation

The Revenue Requirement formula considers tax expense as a pass-through cost to be recovered from customers. For tax purposes, the Vanilla WACC is applied to the average RAB for the period under review, and does not include the cost of debt as it is a pre-tax determination. The tax calculations further includes the flow of funds related to the claw-back. The calculation for tax is illustrated below:

Table 16: Tax Calculation

DETAILS	FY 2016/17	FY 2017/18	FY 2018/19
Gross Income	***9 326***	***10 953***	***11 967***
Pre Tax debt return	-	-	-
Equity Return on RAB	2 524	2 803	3 109
ETIMC	67	-	-
Clawback	(680)	66	-
Depreciation	1 928	2 117	2 355
Opex	5 487	5 967	6 503
Deductions	***6 802***	***8 150***	***8 858***
Depreciation	1 928	2 117	2 355
Opex	5 487	5 967	6 503
ETIMC	67	-	-
Clawback	(680)	66	-
Taxable income	***2 524***	***2 803***	***3 109***
Gross up for tax	3 506	3 893	4 318
Tax at 28%	***982***	***1 090***	***1 209***
Tax on Clawback	190	(18)	-
Tax on ETIMC	19		
Tax Allowance	**1 191**	**1 072**	**1 209**

Whilst the equity return is grossed- up for tax, the tax on clawback and ETIMC is treated differently with a tax shield calculated at 28% on the actual flow of funds.

7.1.5 Operating Costs

The Authority's operating costs (Opex) are a reflection of growth in expenditure (in line with the organisations forecasts) due to the day to day operations of the organisation and in support of the strategic initiatives which aim to improve productivity, efficiency as well as enhance port safety. Consequently, most of the Authority's operating costs are of a fixed nature.

The cost elements contributing significantly to the total operating expenditure includes Labour Costs, Energy, Maintenance, Rates & Taxes, Sundry Operating costs, Material, Computer & Info systems, Rental and Pre-Feasibility Studies.

The table below highlights the Authority's material operating expenditure items. The Authority's total costs for FY 2016/17 is made up of R 5 487m (inclusive of Group overhead costs).

Table 17: Operating Costs Including Group Costs

Cost Category	Actual 2014/15 R Million	Budget 2015/16 R Million	Forecast 2016/17 R Million	Dev '15/16 vs 16/17 R Million	Dev '15/16 vs 16/17 Percentage	% of Opex 15/16	Forecast 2017/18 R Million	Forecast 2018/19 R Million	CAGR 2016/17 - 2018/19
Labour Costs	1 909	2 219	2 571	352	16%	53%	2 783	2 931	7%
Rates & taxes	316	363	397	34	9%	8%	443	456	7%
Maintenance	260	329	402	73	22%	8%	452	545	16%
Contract Payments	71	138	157	19	14%	3%	119	139	11%
Energy	440	488	554	65	13%	11%	622	693	12%
Professional services	18	51	56	5	10%	1%	73	89	26%
Material	76	85	104	20	23%	2%	112	124	9%
Computer & Info systems	122	147	157	10	7%	3%	175	201	13%
Rental	60	66	80	13	20%	2%	85	103	14%
Security costs	71	82	89	7	8%	2%	107	131	22%
Pre -Feasibility Studies	43	118	139	21	18%	3%	129	186	16%
Sundry operating costs	17	113	131	18	16%	3%	181	184	3%
Total operating cost (excluding depreciation)	***3 403***	***4 200***	***4 837***	***637***	***15%***	***100%***	***5 280***	***5 782***	***9%***
Group Costs	509	619	650	31	5%		687	721	5%
Total operating cost (Including Group Costs)	**3 912**	**4 819**	**5 487**	**668**	**14%**		**5 967**	**6 503**	**9%**

Full details relating to Opex is provided in ***Annexure C***.

7.1.6 Revenue Claw-back

Per the approved Tariff Methodology, the key purpose of applying a claw back is to ensure that the Authority or any port user does not gain or lose out from discrepancies between forecasts made at the time of the tariff application and actual figures on the realisation of capital expenditure, operating expenditure, depreciation, taxation, volume and inflation (CPI).

The claw-back is initially calculated on forecasts as per the tariff application of the Authority. The final claw-back is then re-calculated when actual information or financial results are available.

*7.1.6.1 **Re-computed Claw-back FY 2014/15***

Based on the performance of the Authority for FY 2014/15, the final calculation of claw back for the financial year equates to an over recovery of R533m. The Regulator allowed the Authority a provisional claw-back of R174m in favour of the Authority, in the FY 2015/16 tariff determination resulting in a total residual claw-back to be returned to customers of R707m. The over-recovery is driven mainly by under expenditure in capex together with the resultant delay in operating expenditure related to this capex. In addition, revenues related to bilateral contracts have further contributed to an over-recovery based on the principles contained in the ROD FY 2015/16. The calculation of clawback with bilateral contracts considered at contract rates is demonstrated in ***Annexure E***.

The approach used in the calculation was to re-determine the revenue requirement given the full information on actual Capex spending, operating expenditure and depreciation.

The FY 2014/15 Revenue[2] of R10 592m reflects the actual revenue in the FY 2014/15 annual financial statements. The calculation of the claw-back is as follows:

- Re-computed Revenue of R9 955m is the composition of the return on RAB of R63 858m based on a vanilla WACC of 5.48% and depreciation of R1 675m. Opex is R 3 826m and Tax is recomputed as a pass-through cost as R956m. This gives the re-computed revenue requirement for FY 2014/15 as highlighted below:

Table 18: Re-computation of RR for FY 2014/15

Details	FY 2014/15 R'm
RAB	**63 858**
WACC	**5.48%**
Return	3 499
Opex	3 826
Depreciation	1 675
	9 000
Plus: Tax	956
Re-computed Revenue Requirement	**9 956**
Plus :Clawback	103
Plus:ETIMC	-
Re-computed Allowed Revenues	**10 059**

[2] Pure revenues based on volumes (AFS Revenue adjusted by the difference in tariff book rates and contracts rates for bilateral contracts and non-cash accounting entries relating to clawback, ETIMC etc.)

The recalculated revenue requirement of R9 956m plus the claw-back of R103m provided in the previous year results in the recomputed allowed revenue of R10 059m. This re-computed allowed revenue compared to the actual revenue of R10 592m gives rise to a recalculated claw back of R533m, plus the provisional claw back in the Authority's favour of R174m as allowed in the ROD FY 2015/16, results in a total claw-back of R707m due to customers.

The final claw-back for FY 2014/15 is calculated as follows:

Table 19: Claw-back calculation FY 2014/15

Details	FY 2014/15 R'm
Re-computed Allowed Revenues	**10 059**
2014/15 AFS Revenue	10 469
Plus: Bilateral Contract Revenues	123
Total Revenue FY 2014/15	**10 592**
Clawback FY 2014/15	(533)
Provisional allowed in ROD FY 2015/16	(174)
Final Clawback FY 2014/15	**(707)**

7.1.6.2 Estimate Claw-back FY 2015/16

The claw back provision for FY 2015/16 is based on the latest estimate of revenue to be earned up to the end of the financial year as compared to what the Regulator has allowed in the FY 2015/16 ROD. The latest estimate of the Revenue to be earned in FY 2015/16 is R10 978m compared to R11 109m allowed. The deviation between the latest estimate revenue and revenues allowed is attributed to volumes not materialising and partially offset by revenues relating to bilateral contracts. This results in a claw-back of R131m in favour of the Authority. In accordance with the Tariff Methodology, fifty percent (50%) of the claw-back due is adjusted for in FY 2016/17, with the other half (50%) adjusted for in FY 2017/18. The calculations are highlighted in the table below:

Table 20: Claw-back estimation FY2015/16

Estimate Clawback	R'm
Allowed Revenue per ROD FY 2015/16	11 109
Latest Estimate Revenue	10 797
Plus: Bilateral Contract revenue	181
Total Latest Estimate Revenue	**10 978**
Estimated Clawback	131
50% Clawback Adjustment in FY 2016/17	**66**
Total Clawback due to customers FY2015/16	
Clawback FY 2014/15	(707)
Return on Clawback FY 2014/15	(39)
Estimate Clawback FY 2015/16	66
Net Clawback FY 2016/17	**(680)**
Clawback Adjustment for FY 2015/16 in FY2017/18 due to the Authority	
50% Clawback Adjustment in FY 2017/18	**66**

Included in the calculations, is a return or finance cost on the claw-back for FY 2014/15. The return is calculated based on the WACC of 5.48% allowed by the Regulator for FY 2014/15.

7.2 Revenue Requirement

The application of the methodology using the respective components described above is illustrated in the table below:

Table 21: Revenue Requirement

Details	FY 2015/16 ROD R'm	FY 2016/17 Fixed Tariff Year R'm	FY 2017/18 Indicative Tariff Years R'm	FY 2018/19 Indicative Tariff Years R'm
RAB	66 789	73 483	80 326	89 203
Vanilla WACC	6.38%	5.31%	5.56%	5.63%
Return on Capital	4 261	3 902	4 466	5 022
Plus: Depreciation	1 791	1 928	2 117	2 355
Plus: Operating Costs	5 020	5 487	5 967	6 503
Plus: Taxation Expense	768	1 191	1 072	1 209
Plus/(Less): Clawback	(581)	(680)	66	-
Plus/(Less): ETIMC	(150)	67	-	-
Revenue Allowed	***11 109***	***11 895***	***13 688***	***15 089***
Less: Real Estate	(2 449)	(2 600)	(2 874)	(3 147)
Marine Revenue	***8 660***	***9 295***	***10 814***	***11 942***

Application of the Revenue Requirement formula results in a revenue requirement of R11 895m comprising of Real Estate business revenue of R2 600m and Marine Business revenue of R9 295m.

7.3 Tariff Application

In order to determine Marine Business revenue to be derived from tariff adjustments, the required revenue of R9 295m is compared with the expected revenue of R8 571m for FY 2015/16 and increased with the expected weighted average growth in volumes of 2.40% for FY 2016/17.

The same process is rolled forward for FY 2016/17 and FY 2017/18 on an indicative basis.

The table that follows indicates the revenue contribution solely on volume movement indicating a weighted average volume growth of 2.40%.

Table 22: Revenues related to volume growth (FY 2016/17)

Details	FY 2015/16 Volumes : Latest Estimate	FY 2015/16 Revenue : Tariff Book Latest Estimate R million	FY 2015/16 Volumes : Increase Budget	FY 2016/17 Revenue : Volume increase before Tariff Increase Budget R million
Containers TEU's				
Deepsea Full: Imports	1 435 055	2 937	49 026	100
Deepsea Full: Exports	1 194 146	804	40 612	27
Transhipment	1 163 635	73	77 507	5
Other	1 111 777	56	38 059	2
Total Container (TEUs)	**4 904 613**	**3 870**	**205 205**	**135**
Vehicles (Units)				
Vehicles: Imports	391 443	482	17 807	(15)
Vehicles: Exports	252 051	99	11 781	4
Other	6 728	0	363	0
Total Ro-Ro (Units)	**650 222**	**582**	**29 951**	**(12)**
Breakbulk (Metric Tons)				
Breakbulk: Imports	2 454 546	104	(2 313)	(1)
Breakbulk: Exports	6 037 746	177	471 495	11
Other	88 495	1	(54 713)	-
Total Breakbulk (Tons)	**8 580 787**	**282**	**414 468**	**10**
Dry Bulk (Metric Tons)				
Coal Exports	77 040 000	260	3 958 000	13
Iron Ore Exports	60 500 000	508	-	-
Manganese Ore Exports	10 200 000	86	100 000	1
Other	23 529 419	330	4 725 584	42
Total Dry Bulk (Tons)	**171 269 419**	**1 184**	**8 783 583**	**56**
Liquid Bulk (Kl)				
Petroleum	33 357 603	419	1 182 811	15
Chemicals	2 226 465	112	30 391	1
Other	1 191 060	59	(3 679)	0
Total Liquid Bulk (Kilo litres)	**36 775 128**	**591**	**1 209 523**	**17**
Cargo Dues Revenue		**6 508**		**206**

Details	FY 2015/16 Revenue Latest Estimate R million	FY 2016/17 Weighted Average Revenue %	FY 2016/17 Revenue: Volume Increase R million	FY 2016/17 Revenue: Before Tariff Increase R million
Containers	3 870	3.5%	135	4 004
Automotive	582	-2.0%	(12)	570
Break Bulk	282	3.7%	10	292
Dry Bulk	1 184	4.7%	56	1 240
Liquid Bulk	591	2.8%	17	607
TOTAL CARGO DUES AFTER REBATE	**6 508**	**3.2%**	**206**	**6 713**
Marine & other revenue	2 063	0.0%	(1)	2 062
TOTAL TARIFF BOOK REVENUE	**8 571**	**2.4%**	**205**	**8 775**
Real estate revenue	2 407	8.0%	193	2 600
TOTAL REVENUE	**10 978**	**3.6%**	**398**	**11 375**

Application of the weighted average volume growth of 2.4% results in an average tariff adjustment of 5.9% for FY 2016/17 and is demonstrated below.

Table 23: Marine Revenue

Marine Revenue	FY 2016/17	FY 2017/18	FY 2018/19
	Fixed Tariff Year	Indicative Tariff Years	
	R'm		
Prior Year Revenue	8 571	9 295	10 814
Estimated Volume Growth	2.40%	3.20%	2.60%
Revenue after volume growth	8 777	9 592	11 095
Required Revenue	9 295	10 814	11 942
Tariff Increase	**5.90%**	**12.74%**	**7.63%**

For FY 2016/17, based on the application of the Tariff Methodology, the Authority applies to the Regulator for revenue of R11 895m comprising Marine Business revenue of R9 295m and Real Estate business revenue of R 2 600m. This translates to an average overall tariff adjustment of 5.90%.

The average tariff adjustment of 5.90% is based on the inclusion of bilateral contracts at tariff book rates as guided by the ROD FY 2015/16. The Authority has adopted the aforementioned approach of the Regulator on the assumption that the recovery of the revenues based on tariff book rates would be legally enforceable. Detailed calculations are highlighted in ***Annexure E***.

The average tariff adjustment over the three year period is approximately 8.76% which is in line with that communicated to stakeholders at the launch of MDS that tariff adjustments would be within the CPI+3% range and is demonstrated in the Table 24 below:

Table 24: Average Tariff Adjustments over a three year period

Details	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	Average over period
	ROD	Tariff Application FY 2016/17			
	% Increase				
Average Tariff Increase : FY 2015/16 to FY 2017/18	4.80%	5.90%	12.74%		**7.81%**
Average Tariff Increase : FY 2016/17 to FY 2018/19		5.90%	12.74%	7.63%	**8.76%**

8. Tariff book

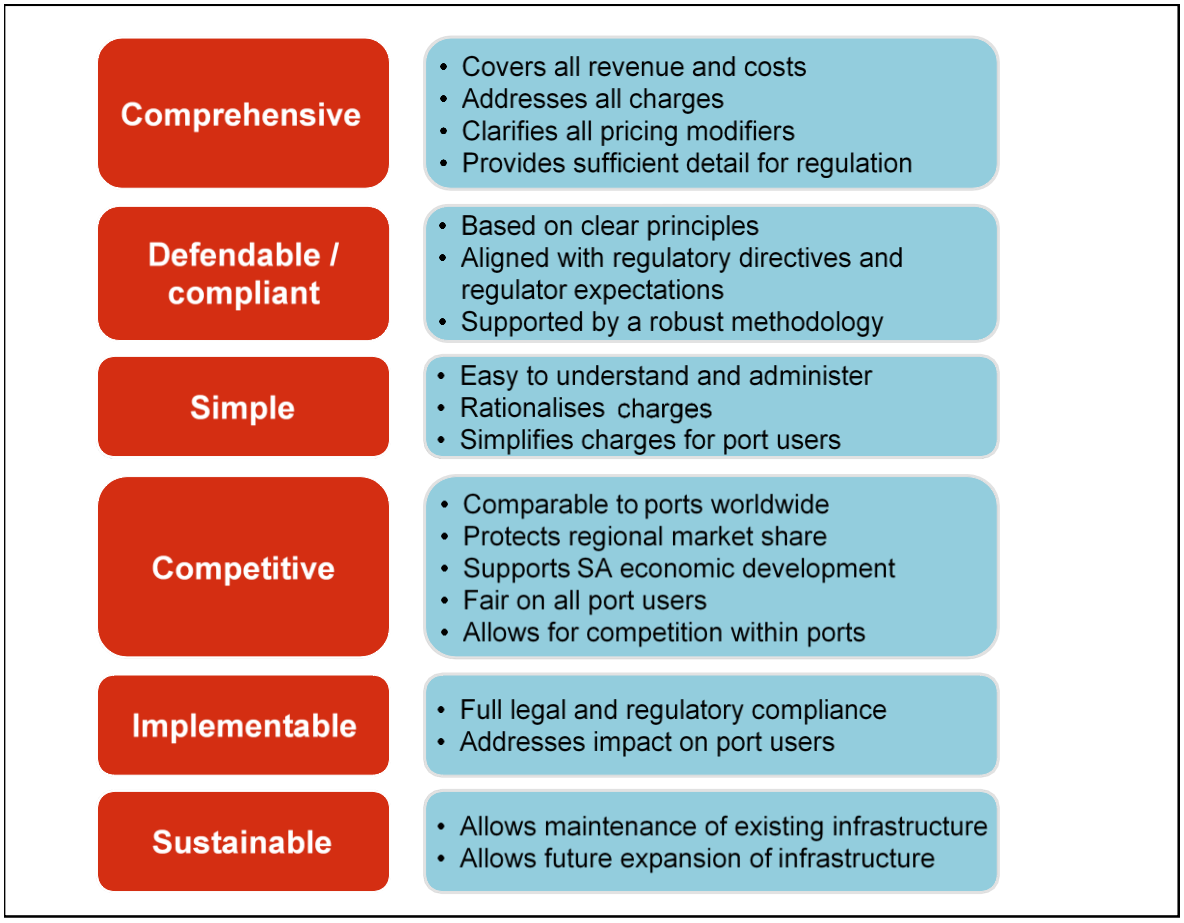
Revenue to the Authority is compensation for the utilisation of the port infrastructure and services for all port users. It is therefore incumbent on the Authority to raise tariffs reasonably in order to sustain the organisation into the future and allow the economy to grow as well.

8.1 The Authority's Pricing Strategy

The Pricing Strategy is informed by Section 72(1)(a) of the Act. The Authority is required with the approval of the Regulator, to determine tariffs for services and facilities offered by the Authority and to annually publish a tariff book containing those tariffs.

The Authority submitted a Pricing Strategy to the Regulator in 2012 which was aimed at addressing imbalances arising from an old ad-valorem pricing system. This system presented an outdated tariff structure which was sub-optimal with several issues relating to transparency, compliance, fairness and overall acceptability by port users. The Pricing Strategy submitted also included a Beneficiation Promotion Programme (BPP) incentivizing the export of beneficiated goods in an effort to support Government's key objectives of industrialization and job creation. The key pillars of the Tariff Strategy are highlighted in the diagram that follows:

Diagram 4: Key Pillars of the Pricing Strategy



In the development of the Pricing Strategy; the Authority adopted an economic allocation of costs approach which is premised on the principle of 'user pay' resulting in cost reflective tariffs. This includes revisiting the contribution of revenue from terminal operators through rental income to follow the international landlord ports model of deriving a larger portion of revenue from rental income. The rationale behind this being that terminal operators economically benefit the most from access to port infrastructure as compared to other port users. In addition the higher the rent levied against terminal operators, the greater the incentive for terminal operators to maximise efficiencies and productivity in order to enhance their own profitability.

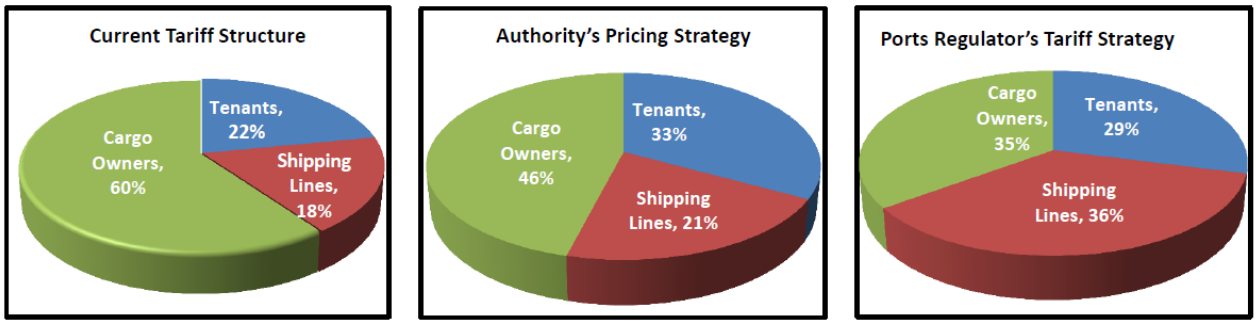
8.2 The Regulators Response to the Authority's Pricing Strategy

The Regulator has published a Global Port Pricing Comparator Study (GPPCS), which benchmarks the South African port charges with similar ports across the world. The Regulator has indicated that its use of the GPPCS is to determine the broad direction of change for port user categories in the Tariff Book. Furthermore the Regulator followed a coherent costed infrastructure according to an asset allocation in the similar manner prescribed by the Authority. The Regulator's Tariff Strategy for the South African ports is premised on the following principles:

- **Cost causation:** To provide port users with the correct pricing signals when utilising port facilities;
- **Cost minimisation:** An approach seen to minimise costs;
- **Distribution of benefits**: To achieve equity and reasonability between causers and beneficiaries of costs; and
- **Practicality:** For practicality and ease of implementation of Tariff Strategy.

The comparison between the Regulator's Tariff Strategy and the Authority's proposal is summarised below:

Diagram 5: Current Tariff Structure vs. Authority's Proposed Pricing Strategy vs. Regulator's Tariff Strategy



This pricing structure which is cost reflective is envisaged to be phased-in over a period of at least 10 years and the Regulator has highlighted the following factors for a prolonged implementation period to be accommodated:

- contractual agreements and binding leases prevents the Regulator from changing tariffs too quickly;
- large shifts in tariffs may lead to unintended consequences and as such, a more gradual approach is favoured; and
- the cost structure of the port system by its very nature changes and evolves over time.

The phased approach as envisaged by the Regulator will lead to the following tariff increase over the envisaged 10 year period:

- **Cargo Owners:** 5.2% real price decrease on an annual basis;
- **Shipping Lines:** 7.2% real price increase on an annual basis; and
- **Tenants:** 2.8% real increase on lease revenue on an annual basis.

It is envisaged that this proposal will result in steep reduction in the contribution of Containers and Automotives cargo category to the overall Revenue Requirement and slightly higher increases to Dry and Break bulk categories with immaterial changes to liquid bulk category.

8.3 Tariff Book Proposal for FY 2016/17

With reference to the Tariff Strategy, the Authority will continue with the exercise of tariff rebalancing to fairly allocate costs to all port user groups as it has done in the previous tariff cycles. This includes reductions to container and Ro-Ro's tariffs and slightly higher increases in Bulk categories. The Marine tariff charges (i.e. recoverable from shipping lines) will receive a higher tariff in line with the Tariff Strategy.

Furthermore the Authority would still re-iterate its support of Government's economic objectives of differentiation between export and import tariffs to ensure the development of the industrial sector with a specific focus on value adding activities. The Regulator has acknowledged the BPP included in the Pricing Strategy proposal and its objectives to enhance the competitiveness of the country's goods and services. The BPP has generally received support; in particular from the Department of Trade & Industry. As part of the Tariff Strategy, the Regulator has mapped out a plan where it will consider the BPP into ports pricing through consultation with stakeholders. The Regulator has already completed the first phase of consultations in roadshows and workshops with stakeholders and decisions on implementation as well as other phases of consultations will be made soon.

These initiatives will increasingly receive attention in the tariff cycles to come as the Tariff Strategy is implemented.

The proposed Tariff Strategy coincides with an economic environment that is experiencing subdued growth and therefore needs to consider these peculiar aspects of the South African economy:

- the South African economy is heavily reliant on exports of minerals and as a result dependent on the economic performance (growth) of major trading partners;
- slower economic growth in comparison to the major trading partners like China and India;
- major export partners including Germany and America growing at much lower rates; and
- other perceptions of risk in emerging markets leading to fluctuations of currencies, risk of capital outflows, rising interest rates and fuel prices etc. (such as China & Greece).

In line with the above and the need to promote the productive use of port infrastructure and efficiency, the Authority proposes differentiated tariffs as follows:

- **6.80% on marine charges (shipping lines);**
- **5.90% on exports of dry bulk (coal, iron ore & manganese); and**

- **5.60% on all other cargo dues.**

The weighted average tariff adjustment of **5.90%** for FY 2016/17, with the differentiated tariff approach to address some of the issues highlighted above results in the following table:

Table 25: Differentiated Tariff Approach results

Details	FY 2015/16 Volumes : Latest Estimate	FY 2015/16 Revenue : Tariff Book Latest Estimate R million	FY 2015/16 Volumes : Increase Budget	FY 2016/17 Revenue : Volume increase before Tariff Increase Budget R million	FY 2016/17 Revenue : Only Tariff Increase Budget R million	FY 2016/17 Average Tariff Increase %	FY 2016/17 TOTAL Revenue Budget R million	FY 2016/17 TOTAL Volume Budget
Containers TEU's								
Deepsea Full: Imports	1 435 055	2 937	49 026	100	170	5.6%	3 207	1 484 081
Deepsea Full: Exports	1 194 146	804	40 612	27	47	5.6%	878	1 234 759
Transhipment	1 163 635	73	77 507	5	4	5.6%	82	1 241 142
Other	1 111 777	56	38 059	2	3	5.6%	61	1 149 836
Total Container (TEUs)	**4 904 613**	**3 870**	**205 205**	**135**	**224**	**5.6%**	**4 228**	**5 109 818**
Vehicles (Units)								
Vehicles: Imports	391 443	482	17 807	(15)	26	5.6%	493	409 250
Vehicles: Exports	252 051	99	11 781	4	6	5.6%	108	263 832
Other	6 728	0	363	0	(0)	5.6%	0	7 091
Total Ro-Ro (Units)	**650 222**	**582**	**29 951**	**(12)**	**32**	**5.6%**	**602**	**680 173**
Breakbulk (Metric Tons)								
Breakbulk: Imports	2 454 546	104	(2 313)	(1)	6	5.6%	109	2 452 233
Breakbulk: Exports	6 037 746	177	471 495	11	11	5.6%	199	6 509 241
Other	88 495	1	(54 713)	-	0	5.6%	1	33 781
Total Breakbulk (Tons)	**8 580 787**	**282**	**414 468**	**10**	**16**	**5.6%**	**309**	**8 995 255**
Dry Bulk (Metric Tons)								
Coal Exports	77 040 000	260	3 958 000	13	16	5.9%	289	80 998 000
Iron Ore Exports	60 500 000	508	-	-	30	5.9%	538	60 500 000
Manganese Ore Exports	10 200 000	86	100 000	1	5	5.9%	92	10 300 000
Other	23 529 419	330	4 725 584	42	21	5.6%	393	28 255 002
Total Dry Bulk (Tons)	**171 269 419**	**1 184**	**8 783 583**	**56**	**72**	**5.8%**	**1 312**	**180 053 002**
Liquid Bulk (Kl)								
Petroleum	33 357 603	419	1 182 811	15	24	5.6%	459	34 540 414
Chemicals	2 226 465	112	30 391	1	6	5.6%	120	2 256 856
Other	1 191 060	59	(3 679)	0	3	5.6%	63	1 187 381
Total Liquid Bulk (Kilo litres)	**36 775 128**	**591**	**1 209 523**	**17**	**34**	**5.6%**	**641**	**37 984 651**
Cargo Dues Revenue		**6 508**		**206**	**379**		**7 092**	

Details	FY 2015/16 Revenue Latest Estimate R million	FY 2016/17 Weighted Average Revenue Volume Increase %	FY 2016/17 Revenue: Volume Increase R million	FY 2016/17 Revenue: Tariff Increase R million	FY 2016/17 Weighted Average Revenue Tariff Increase %	FY 2016/17 Revenue Budget R million
Containers	3 870	3.5%	135	224	5.60%	4 228
Automotive	582	-2.0%	(12)	32	5.60%	602
Break Bulk	282	3.7%	10	16	5.60%	309
Dry Bulk	1 184	4.7%	56	72	5.81%	1 312
Liquid Bulk	591	2.8%	17	34	5.60%	641
TOTAL CARGO DUES AFTER REBATE	**6 508**	**3.2%**	**206**	**379**	**5.64%**	**7 092**
Marine & other revenue	2 063	0.0%	(1)	140	6.80%	2 203
TOTAL TARIFF BOOK REVENUE	**8 571**	**2.4%**	**205**	**519**	**5.91%**	**9 295**
Real estate revenue	2 407	8.0%	193			2 600
TOTAL REVENUE	**10 978**	**3.6%**	**398**	**519**		**11 895**

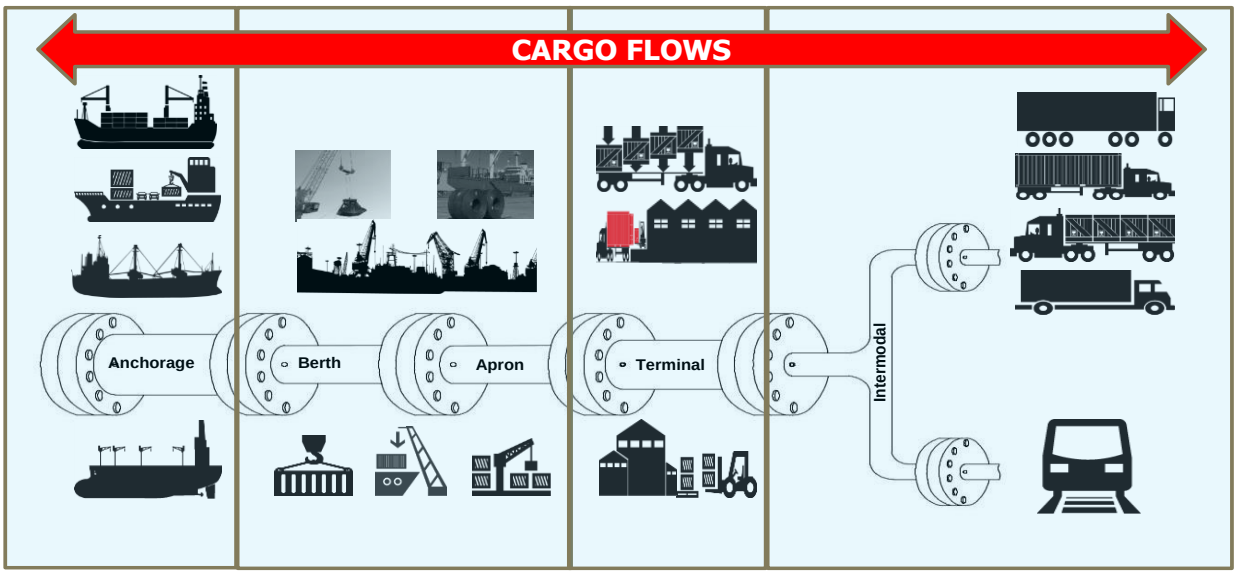
9. Port Efficiency

Ports are critical components of international supply chains. The efficiency of ports is a determinant of the level to which the trade potential of an economy may be realised through the movement of cargo within a specific period. Given that approximately 98% of South Africa's international cargo is handled through eight commercial gateway ports, the efficiency of these ports is of strategic importance.

The concept of port efficiency permeates ownership, management, control and administration of ports. This is well documented in the Act and the National Commercial Ports Policy of 2002. Consequently, port efficiency initiatives comprise a significant part of the strategy of the National Ports Authority.

The Authority is focusing on improving ship turnaround time and cargo dwell time at South African ports to standards that are acceptable to port users, commensurate with the installed capacity at ports and thereafter to progressively improve efficiencies up to design and internationally competitive levels. In this regard, the National Ports Authority has adopted a holistic Port Performance Model as shown is **Diagram 6: Port Performance Model** where emphasis is placed on the efficiency levels of the respective port users driving ship and cargo time at ports. This model is underpinned by a quantitative approach which relates actual performance to standards that have been set through a process of consultation.

Diagram 6: Port Performance Model



The Port Efficiency Improvement Initiatives implemented by the Authority to give expression to the Port Performance Model are shown in **Diagram 7: Port Efficiency Improvement Initiatives** below.

As per the Act, the Authority implemented Terminal Operator Performance Standards (TOPS) for licenced Terminal Operators across ports for the first time in August 2013 and revised TOPS as TOPS Year 2 in September 2014. The third annual revised TOPS (TOPS Year 3) was issued in July, 2015 effective until June 2016. These three iterations have enabled the Authority to research, develop and embed a TOPS system that forms a point of reference for Terminal Operator compliance to expected efficiency levels. TOPS Year 3 is supported by operational performance information as well as terminal specific capacity simulations.

TOPS is underpinned by consultation with a wide spectrum of port users and stakeholders. Consultation on the setting of TOPS receives specific attention by a TOPS Sub Committee of each PCC.

TOPS is at a point of readiness for the Authority to commence engagements with Terminal Operators and port users on the TOPS Penalty for repeated non-compliance to performance standards as envisaged in the Terminal Operator Licence as well as the attribution of efficiency improvements above performance standard levels for possible use in the Tariff Model.

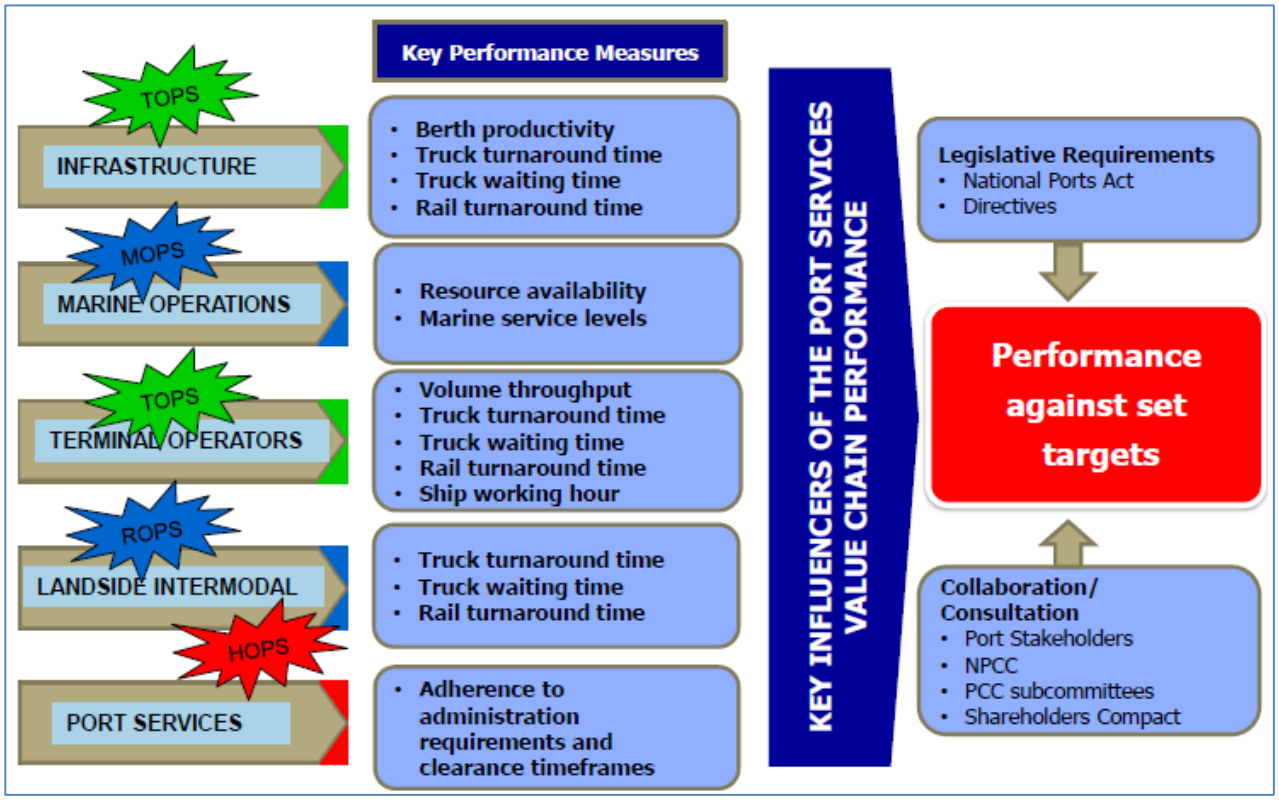
The Authority has given regard to the role by other port users towards ship turnaround time in the Port Performance Model. The first instance of Marine Operator Performance Standards (MOPS) has been implemented for the Authority's Marine Services and Shipping Lines along with a marine slot booking system at each port. This will enable efficiency and service level monitoring of waterside operations against a structured booking schedule, isolate marine related delays and effect improvements. The Authority has commenced with development of initiatives informed by similar principles for rail operations as Rail Operator Performance Standards (ROPS). The Authority has commenced with the development of Haulier – (Road) Operations Performance Standards (HOPS) with the implementation of a control system for the Truck Staging Area at the Port of Richards Bay and a pilot HOPS project for road traffic at the Port of Durban. The ROPS and HOPS initiatives will progress during FY 2015/16.

The institutional capacity of the Authority to ensure that port efficiency oversight is achieved at the correct levels is being improved through the establishment of an Operations Department led by a Senior Operations Manager per port (per port precinct in Durban) to concentrate on creating the necessary environment for port users to achieve the expected levels of port performance.

The Authority is in the process of implementing the modules of a "Smart Port" in order to improve information exchange between the Authority and port users. The Integrated Port Management System (IPMS) implemented and piloted at the Port of Durban in July 2015 supports a range of information tools and port user interfaces which will provide the strategic technology base towards the realisation of a "Smart Port". The Authority is at an advanced stage in the implementation of Port Operations Centres at all Ports and Head Office. Construction of Port Operations Centres has been completed in 5 ports and the process of resourcing is underway. Port Operations Centres will provide a holistic view of the ports supply chain through the strategic technology base mentioned above in order to monitor port performance, identify constraints and effect corrective action timeously. Port Operations Centres will be evolved into Joint Operations Centres in a phased manner allowing key port users to jointly plan, monitor and control port operations in order to improve logistics performance.

The development of an operations mindset amongst staff is a training priority which is considered as an important component of the ability of the Authority to improve port efficiency.

Diagram 7: Port Efficiency Improvement Initiatives



The Authority has made significant progress towards developing institutional capacity and improving human resource levels to address port efficiency improvement. Port Oversight Committees have been established per port to administer efficiency improvement initiatives and oversight. Port Oversight Committees will ensure, amongst others that remedial actions are implemented where performance standards are not achieved in practice. The establishment of Port Operations Centres which will monitor the performance of port operations against relevant targets or standards.

The Authority is confident that the above focus will lead to improved capacity utilisation and increased levels of port efficiency.

9.1 Terminal Operations Licencing Oversight

The Terminal Operating Licence establishes the framework and the conditions that the Authority prescribes for terminal operators within its respective port precincts.

Some of the key components of the Licence include the Safety, Health and Environmental Management compliance, Maintenance regime for its assets, as well as the operational performance requirements.

Since the issue of the eighty nine (89) Terminal Operator Licences in July 2012, in terms of Section 57 read with Section 65 of the Act, a detailed Oversight Regime has been developed and implemented. In terms of Section 79 of the Act, an additional licence for the Ngqura container terminal was issued resulting in a total of ninety (90) licences being issued.

Insofar as terminal operational performance is concerned, the various measures for the 90 terminals have been finalised in conjunction with the Terminal Operators and are being monitored and refined on an ongoing basis.

10. Marine Operations Management

The Authority is committed to ensuring a seamless marine service is provided to vessels arriving, departing and shifting within South African ports.

This will include a process of stringent monitoring and measurement of the causative factors, which could result in ships being delayed due to Pilotage, Tugs or Berthing Services (which are under the direct control of the Authority). Approved targets have been set for each of the aforementioned categories and are monitored at various managerial platforms.

10.1.1 Pilotage

Pilotage delays are caused due to pilot license restrictions or the pilot being occupied with other shipping at the required service time.

In order to reduce the abovementioned type of delay the following initiatives are currently being implemented:

- On-going focus of ensuring that pilots are qualified to higher license levels (up to open license) thereby ensuring an appropriate spread of experience across all shifts; and
- On-going proficiency training which will include simulator training as well as in class training sessions.

The first phase of this capacity development project commenced in the second half of FY 2012/13. The progress regarding the aforementioned project is highlighted below:

- A total of 16 helicopter pilot trainees obtained formal qualifications in April 2014 and are currently on experiential on the job training;
- A total of 7 helicopter pilot trainees being recruited in 2015 and will obtain licenses in December 2017
- A total of 6 helicopter maintenance engineering trainees were recruited in January 2013 and are expected to qualify in December 2017;
- Another 10 helicopter maintenance engineering trainees being recruited in January 2015 and are expected to qualify in December 2019.
- A total of thirty (39) aviation cadets are currently in training which includes 23 aviation pilots and 16 engineers.

10.1.2 Towage

Tug delays are caused by tugs not being available at the required service time due to mechanical breakdowns, the tugs being busy with other shipping, or due to a shortage of tug capacity (which includes manning levels).

In order to reduce the abovementioned types of delays, the following initiatives are currently being implemented:

- The on-going upgrade of the existing marine fleet which includes the delivery of new tugs which are now operational in the various ports;
- In August 2014, the Authority has also contracted the building of 8 x 70 Tonne and 1 x 100 Tonne bollard pull tugs with a local shipyard in South Africa (SA Shipyards) over a period of 42 months; These tugs are replacements for Saldanha, Port Elizabeth, Durban and Richards Bay;
- On-going focus on the Tug Maintenance regime to ensure maximum availability;
- Implementation of the Marine Operational Performance Standards [MOPS] to manage performance; and
- Initiatives to ramp up services in Durban, Richards Bay and Cape Town to ensure sufficient tug capacity. This means increasing the number of personnel to man the additional craft to be deployed.

The changes in the regulations namely Merchant Shipping Act, 1951 (Act No. 57 of 1951) - Merchant Shipping (Safe Manning, Training and Certification) Regulations, 2013 come into force on the 01 January 2017. This means that the qualifications and certificates of competence required by the Authority to man the tugs, must comply with the regulations. Hence, there is a significant effort by the Authority to ensure that all the necessary training and development is in place to ensure compliance with SAMSA standards.

10.1.3 Berthing Services

Berthing delays are generally caused due to insufficient berthing teams that are allocated to a berth or not being available at the required service time due to servicing another vessel.

In order to reduce the abovementioned type of delays, a quad shift system at the ports of Cape Town, Durban, Saldanha and Richards Bay as well as additional number of personnel per team have been implemented which will ensure that the berthing services shift patterns are aligned with the pilotage; tug operations and that of the personnel in the teams are self-relieving (catering for personnel on leave and training).

Marine Operations will review all marine operational processes, and this includes marine operational planning, resourcing and fleet replacement strategy. The functional structures are continuously being monitored to improve efficiency levels. It is expected that this will also ensure that the current number of shipping delays are reduced, thereby further enhancing the overall efficiency of the ports system. Efficiencies will be measured in accordance with the Marine Operations Performance Standards and will be monitored and recorded by the Operations Centres.

11. Conclusion

Investment in infrastructure and growth of the economy are central to the South African Government's New Growth Plan and National Development Plan. By expanding port infrastructure, the MDS will have a marked impact on the economy such as creation of direct and indirect employment, development of skills and the improvement of port efficiencies resulting in lasting economic, social and environmental value to South Africa.

The key drivers for the expansion of port infrastructures are highlighted below:

- **Economic changes**. Seaborne trade has increased substantially, in part because of the massive redistribution of manufacturing to low cost locations and in part because of ongoing economic growth. This underlines the growing importance of port infrastructure to organize the resulting complex distribution system.
- **Technical changes**. The growth in ship size to better achieve economies of scale has been a prevalent technical change. There is also a growing level of ship specialization (containerships, bulk carriers, car carriers, and even cruise ships) that require dedicated port terminal facilities. All of the above has been placing pressure on ports to upgrade and improve their facilities.
- **Organizational changes**. The maritime and port industries are influenced by large shipping companies and terminal operators that have engaged in strategic alliances as well as mergers and acquisitions. Their goal is to provide a level of vertical and horizontal integration, which is improving the performance of the port transport chain. This has led to the need of increased expansion in ports infrastructure and intermodal connectivity.

Whilst the Authority continues with the implementation of the MDS capital programme to ensure port infrastructure capacity ahead of demand, it remains committed to Governments objective of lowering the cost of doing business in South Africa. In accordance with this objective, the Authority has considered a tariff adjustment in line with inflation for FY 2016/17 whilst attempting to smooth the tariff trajectory in future years.

In accordance with the approved Tariff Methodology issued by the Regulator and based on the Revenue Requirement formula the Authority hereby applies to the Regulator for revenues of R11 895m comprising Marine Business revenue of R9 295m and Real Estate business revenue of R2 600m. This translates to an average overall tariff adjustment of 5.90% and indicative tariff adjustments of 12.74% for FY 2017/18 and 7.63% for FY 2018/19[3].

[3] Whilst the approved tariff methodology is only applicable up to FY 2017/18, the Authority has modelled FY 2018/19 in order to demonstrate the tariff trajectory over three years.

ANNEXURE A: The Authority's Tariff Book

Table 26: The Authority's Tariff Definitions

Tariffs	Service Rendered	Application
Light dues	The provision of navigation aids to vessels along the South African coast	Raised per vessel (per gross ton) at the first port of call (Tariff Book Section 1)
Vessel Traffic Services	The provision of vessel traffic services, safety of the port environment and port control	Raised per vessel (per gross ton) at all ports (Tariff Book Section 2)
Port dues	The provision and maintenance of entrance channels, breakwaters, turning basins, navigational aids (beacons and buoys inside port limits) and maintenance dredging inside the port	Raised per vessel (per gross ton), linked to the time that the vessel remains in port (Tariff Book Section 4)
Berth dues	The provision and maintenance of repair quays and other non-cargo quay (berth) infrastructure	Raised per vessel (per gross ton), per 24-hour period (Tariff Book Section 4)
Cargo dues	To recover the cargo contribution towards the provision and maintenance of basic port infrastructure	Raised per unit of cargo, differentiated between different commodities (Tariff Book Section 7)
Rentals	Lease of port land to terminal operators, port service and port facility providers	Rental arrangements including escalations are negotiated on a case-by-case basis and are not reflected in the tariff book.
Pilotage	Pilotage assistance to vessels entering/leaving the port	Raised as a basic fee per service, plus per vessel (per gross ton) (Tariff Book Section 3)
Tug Assistance	Tug assistance to vessels entering/leaving and shifting within the port	Raised per service, based on the size of the vessel (per gross ton) (Tariff Book Section 3)

Miscellaneous Tug/Vessel services	Tanker fire watch, fire fighting and standby services	Raised per service, per hour (Tariff Book Section 3)
Berthing Services	Berthing services to tie/untie vessels at the berth	Raised per service (Tariff Book Section 3)
Running of Vessel Lines	Running of lines for vessels entering, leaving or shifting	Raised per service (Tariff Book Section 3)
Floating Crane Services	Floating crane services rendered to the vessels	Raised per service, per hour (Tariff Book Section 3)
Ship Repair Facilities[4]	Preparation, Docking and Undocking of vessels at repair facilities	Raised per service (Tariff Book Section 6)
Dry-dock, floating dock, synchrolift and slipways	Dry-dock, floating dock and synchrolift fees	Raised per service for the use of a facility, based on the size of the vessel (per gross ton) (Tariff Book Section 6)

Authority has created a separate section in the Tariff Book, Section 5, where the licence, registration and permit fees are specified. This is summarized in the following table:

Table 27: The Authority's License Fees

Fees	Service rendered	Application
Port Service Licence, Port Rule Licence, Port Rule Registrations and Port Rule Permit Fees	Fees payable for licences, registrations and permits in accordance with section 57 of the Act and with Port Rules issued in terms of section 80(2) of the Act.	Raised as a fee for the respective licences, registrations and permits issued (Tariff Book Section 5)

[4] The Authority has re-evaluated its involvement in ship repair facilities and the operation thereof. The decision has been taken that the Authority will continue to operate its ship repair facilities until the approval of the ship repair strategy.

ANNEXURE B: Capital Expenditure

The Authority's investment spending is primarily influenced by the strategic initiatives which are aimed at providing adequate port infrastructure ahead of demand.

The capital expenditure for FY 2015/16 to FY 2018/19 is segregated into various categories in order to demonstrate the strategic objectives, major projects considered and the impact of such capital expenditure. In order to provide a view on future capex, information for a 7 year period has also been included. The figures presented below do not include any investments related to the Durban International Airport (Durban Dig Out Port) as guided by the Ports Regulator previously and in the approved Tariff Methodology.

The tables that follow illustrate the capital expenditure:

Table 28: Strategic Capital Investment Objectives

Strategic objective	Details	LE	Projections		
		2015/16	2016/17	2017/18	2018/19
		Rm			
Re-engineering, Integration, Productivity and Efficiency	To maximise return on investments by obtaining additional volumes	618	1 241	2 673	4 422
	To maximise return on investments by improving operating efficiencies	599	962	363	142
	To preserve current revenue streams without obtaining additional volumes (ie. revenue protection)	1 083	1 348	2 170	1 979
Safety, Risk and Effective Governance	Ensure Safety Optimisation	612	364	583	617
	Optimise Business Enterprise Offerings	69	126	172	112
	Optimally Satisfy Social Investments (non economic value creating projects)	-	10	17	30
	Environmental	45	44	24	8
Human Capital	Optimise Human Resources	30	50	88	69
Total (excl. borrowing cost)		**3 055**	**4 144**	**6 090**	**7 377**

Table 29: List of Major Projects for the Authority

Project	Corridor	Commodity
Acquisition of 9 tugs (Rcb, Dbn, PE & Sld)	RCB/DBN/PE/SLD	All
Facility for Liquefied Natural Gas - LNG	RCB	Liquid Bulk
Reconstruction of Sheet-Pile Quay Walls at Maydon Wharf	DBN	Break Bulk
Edwin Swales Link Road FEL 4	DBN	Other
Execution: DCT berth deepening 203 to 205	DBN	Containers (Maritime)
Acquistion of 6 tugs for Dbn (4 Replacement & 2 additional)	DBN	Other
Execution: Pier 1 Phase 2 Infill (Salisbury Island)	DBN	Containers (Maritime)
Extend main breakwater and deepen entrance	EL	Other
Operationalise Port for Containers (Prelim & Execution)	NGQ	Containers (Maritime)
Tank farm Berth A100, roads, port entrance and services	NGQ	Liquid Bulk
General Cargo Berth B101 and associated services	NGQ	Break Bulk
Manganese project	NGQ	Manganese
Container berth expansion (4 berths and extension of breakwater and sand bypass)	NGQ	Containers (Maritime)
Port Infrastructure for Mossgas Quay Extension & Associated Dredging Works & Dry Dock Facilities - change to Provision of Ship repair (Floating dock and rig repair)	SLD	Break Bulk
Ore Expansion Phase 2 Berth Construction	SLD	Export Iron Ore
Provision of second new TSHD	DRS	Other

Table 30: Expansion Business vs. Maintenance of Current Business

- FY 2015/16

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Latest Estimates 2015/16 Rm											
Expand Business :												
- Growth initiatives	922	111	42	3	387	1	12	-	95	-	271	-
Maintain current Business :												
- Replacement Efficiency/ Service Quality	2 133	380	796	135	16	218	4	169	155	92	78	92
Total (excl. borrowing cost)	**3 055**	**491**	**838**	**137**	**403**	**219**	**16**	**169**	**250**	**92**	**349**	**92**

- FY 2016/17

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections 2016/17 Rm											
Expand Business :												
- Growth initiatives	1 727	193	567	4	603	6	10	10	74	-	212	48
Maintain current Business :												
- Replacement Efficiency/ Service Quality	2 417	253	886	172	57	256	11	350	305	25	24	79
Total (excl. borrowing cost)	**4 144**	**446**	**1 453**	**176**	**660**	**262**	**21**	**360**	**379**	**25**	**236**	**127**

- FY 2017/18

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections 2017/18 Rm											
Expand Business :												
- Growth initiatives	2 922	243	972	11	1 175	17	5	51	398	4	-	46
Maintain current Business :												
- Replacement Efficiency/ Service Quality	3 167	294	1 267	111	201	278	48	477	316	54	2	121
Total (excl. borrowing cost)	**6 090**	**537**	**2 239**	**122**	**1 376**	**294**	**53**	**528**	**715**	**58**	**2**	**167**

- FY 2018/19

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections 2018/19 Rm											
Expand Business :												
- Growth initiatives	4 845	288	2 230	31	1 299	30	-	100	825	-	-	42
Maintain current Business :												
- Replacement Efficiency/ Service Quality	2 533	100	1 065	204	203	488	46	153	168	31	2	73
Total (excl. borrowing cost)	**7 377**	**388**	**3 295**	**235**	**1 501**	**518**	**46**	**253**	**993**	**31**	**2**	**115**

Table 31: Ports Related Spending by Asset Type

- FY 2015/16

Asset Type	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Latest Estimates 2015/16 Rm											
Buildings and structures	524	372	66	34	-	14	12	18	4	4	-	-
Aircraft	-	-	-	-	-	-	-	-	-	-	-	-
Land	13	6	6	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	623	6	262	3	2	9	1	137	6	88	18	92
Permanent way and works	16	7	1	8	-	-	-	-	-	-	-	-
Vehicles, Rolling stock & containers	-	-	-	-	-	-	-	-	-	-	-	-
Port Facilities	1 860	100	484	92	401	196	3	14	239	-	331	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	19	-	19	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	**3 055**	**491**	**838**	**137**	**403**	**219**	**16**	**169**	**250**	**92**	**349**	**92**

- FY 2016/17

Asset Type	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projectiona 2016/17 Rm											
Buildings and structures	531	206	163	9	8	9	16	80	35	5	-	-
Aircraft	152	30	122	-	-	-	-	-	-	-	-	-
Land	5	-	5	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	435	13	116	3	4	6	1	135	6	20	4	127
Permanent way and works	124	62	2	16	-	44	-	-	-	-	-	-
Vehicles, Rolling stock & containers	10	-	-	5	5	-	-	-	-	-	-	-
Port Facilities	2 871	135	1 028	143	643	203	4	145	338	-	232	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	16	-	16	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	**4 144**	**446**	**1 453**	**176**	**660**	**262**	**21**	**360**	**379**	**25**	**236**	**127**

- FY 2017/18

Asset Type	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projectiona 2017/18 Rm											
Buildings and structures	845	102	456	27	27	27	16	128	47	15	-	-
Aircraft	167	137	30	-	-	-	-	-	-	-	-	-
Land	15	-	15	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	745	15	238	2	3	53	6	215	4	43	2	167
Permanent way and works	200	143	50	-	-	7	-	-	-	-	-	-
Vehicles, Rolling stock & containers	16	-	-	1	15	-	-	-	-	-	-	-
Port Facilities	4 094	140	1 442	93	1 331	208	31	185	664	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	8	-	8	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	**6 090**	**537**	**2 239**	**122**	**1 376**	**294**	**53**	**528**	**715**	**58**	**2**	**167**

- FY 2018/19

Asset Type	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projectiona											
	2018/19											
	Rm											
Buildings and structures	904	82	569	44	87	5	8	57	53	-	-	-
Aircraft	170	85	85	-	-	-	-	-	-	-	-	-
Land	47	47	-	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	312	14	114	2	3	23	1	4	4	31	2	115
Permanent way and works	198	139	50	-	-	9	-	-	-	-	-	-
Vehicles, Rolling stock & containers	44	1	1	42	-	-	-	-	-	-	-	-
Port Facilities	5 704	20	2 476	147	1 412	481	38	192	937	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	-	-	-	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	**7 377**	**388**	**3 295**	**235**	**1 501**	**518**	**46**	**253**	**993**	**31**	**2**	**115**

Table 32: Capital expenditure and throughput per commodity

- Containers

Containers								
Details	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**Major Capital Projects**
	R'm							
Containers	**350**	**666**	**1 142**	**2 405**	**3 547**	**3 521**	**3 032**	- Dbn: DCT berth deepening berth 203 to 205
-Expand	*350*	*646*	*992*	*2 205*	*3 417*	*3 521*	*3 032*	- Dbn: Pier 1 phase 2 Infill (Salisbury Island)
-Maintain	*-*	*20*	*150*	*200*	*130*	*-*	*-*	- NGQ: Automated mooring system D101 -103
Volumes ('000 TEUs)								
-Budget and Projections	*4 905*	*5 110*	*5 310*	*5 475*	*5 728*	*5 902*	*6 110*	
-Capacity	*8 543*	*8 543*	*8 543*	*8 543*	*8 943*	*8 943*	*10 143*	
Total capex spend to this year						11 631		
Indicative return on capital						*618*		
Depreciation						*291*		
Additional Revenue Required						***908***		

- Liquid Bulk

Liquid Bulk								
Details	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**Major Capital Projects**
	R'm							
Liquid Bulk	**196**	**342**	**1 301**	**1 143**	**629**	**868**	**595**	- NGQ: tank farm Berth A100, roads, port entrance and services
-Expand	*32*	*89*	*853*	*980*	*573*	*863*	*585*	- RCB: Facility for LNG
-Maintain	*163*	*252*	*448*	*162*	*57*	*5*	*10*	
Volumes (mKl)								
-Budget and Projections	*37*	*38*	*39*	*41*	*41*	*43*	*44*	
-Capacity	*77*	*77*	*78*	*78*	*80*	*80*	*81*	
Total capex spend to this year						4 478		
Indicative return on capital						*238*		
Depreciation						*112*		
Additional Revenue Required						***350***		

- Iron Ore

Iron Ore								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Iron Ore	7	134	518	887	1 102	700	396	- SLD: Ore Expansion Phase 2 berth Construction (to 82.5mtpa)
-Expand	*-2*	*12*	*367*	*772*	*1 102*	*700*	*396*	
-Maintain	*9*	*122*	*151*	*115*	-	-	-	
Volumes (mt)								
-Budget and Projections	*61*	*61*	*61*	*61*	*61*	*61*	*61*	
-Capacity	*67*	*67*	*67*	*67*	*83*	*83*	*83*	
Total capex spend to this year						3 348		
Indicative return on capital						*178*		
Depreciation						*84*		
Additional Revenue Required						***261***		

- Coal

Coal								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Coal	-	-	3	1	5	119	10	- EL: Land preparation for coal export facility
-Expand	-	-	*3*	*1*	*5*	*119*	-	
-Maintain	-	-	-	-	-	-	*10*	
Volumes (mt)								
-Budget and Projections	*77*	*81*	*87*	*91*	*98*	*97*	*98*	
-Capacity	*113*	*113*	*115*	*115*	*115*	*115*	*115*	

- Manganese

Manganese								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Manganese	24	256	208	5	-	-	80	- NGQ: Manganese terminal
-Expand	*24*	*256*	*208*	*5*	-	-	-	
-Maintain	-	-	-	-	-	-	*80*	
Volumes (mt)								
-Budget and Projections	*10*	*10*	*10*	*10*	*10*	*11*	*13*	
-Capacity	*10*	*10*	*24*	*24*	*24*	*24*	*24*	
Total capex spend to this year				494				
Indicative return on capital				*26*				
Depreciation				*12*				
Additional Revenue Required				***39***				

- Break-Bulk

Break Bulk								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Break Bulk	474	391	36	52	25	58	505	- DBN: Reconstruction of Sheet-Pile quay Walls at Maydon Wharf
-Expand	*96*	*56*	*3*	*43*	*25*	*53*	*500*	- DBN: Berth Deepening Maydon Wharf 5-11 & 15
-Maintain	*378*	*335*	*34*	*9*	-	*5*	*5*	
Volumes (mt)								
-Budget and Projections	*9*	*9*	*9*	*10*	*10*	*10*	*11*	
-Capacity	*30*	*30*	*30*	*30*	*30*	*30*	*30*	

- Automotives

Automotives								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Automotives	-	-	-	-	-	-	-	- Increased capacity is due to additional slots at Durban Car Terminal
-Expand	-	-	-	-	-	-	-	
-Maintain	-	-	-	-	-	-	-	
Volumes (units)								
-Budget and Projections	650 222	680 173	732 445	768 332	806 085	851 521	904 268	
-Capacity	850 000	890 000	890 000	890 000	1 010 000	1 010 000	1 010 000	

- Other (Incl. LHS & Bulk Services)

Other (incl LHS & Bulk Services)								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Other (incl LHS & Bulk Services)	1 312	1 588	2 618	2 563	1 554	1 493	1 673	- This includes all other investments at Ports
-Expand	36	212	392	668	358	402	605	including port entrances, roads, electrical
-Maintain	1 276	1 376	2 226	1 895	1 196	1 091	1 068	networks, sewerage networks etc

- Fleet- Craft & Dredging Services

Fleet-Craft and Dredging Services								
Details	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Major Capital Projects
	R'm							
Fleet - Craft	343	530	261	320	582	915	720	- DRS: Provision of 2nd TSHD
								- Tugs: Acquisition of 9 tugs
-Expand	113	242	104	170	300	121	-	(RCB,DBN,PE,SLD)
-Maintain	230	288	157	150	282	794	720	- Tugs: Acquisition of 6 tugs (DBN)
Dredging Services	349	236	2	2	2	92	2	
-Expand	271	212	-	-	-	-	-	
-Maintain	78	24	2	2	2	92	2	

Table 33: Multi-Year Strategic Objectives

Strategic objective	Details	LE	Projections						Total 7yr
		2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	
		Rm							
Re-engineering, Integration, Productivity and Efficiency	To maximise return on investments by obtaining additional volumes	618	1 241	2 673	4 422	5 564	5 595	4 864	24 977
	To maximise return on investments by improving operating efficiencies	599	962	363	142	98	62	-	2 224
	To preserve current revenue streams without obtaining additional volumes (ie. revenue protection)	1 083	1 348	2 170	1 979	1 320	1 951	1 837	11 688
Safety, Risk and Effective Governance	Ensure Safety Optimisation	612	364	583	617	339	133	119	2 767
	Optimise Business Enterprise Offerings	69	126	172	112	70	-	-	548
	Optimally Satisfy Social Investments (non economic value creating projects)	-	10	17	30	13	-	80	149
	Environmental	45	44	24	8	7	-	-	127
Human Capital	Optimise Human Resources	30	50	88	69	35	25	115	412
Total (excl. borrowing cost)		3 055	4 144	6 090	7 377	7 445	7 765	7 015	42 891

Table 34: Multi-Year Capex Spending Per Port Service

Capex spend per Port Service / Facility	LE	Projections						
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Total 7yr
	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Infrastructure	2 271	3 353	5 769	7 024	6 790	6 660	6 219	38 087
Marine services	343	530	261	320	582	915	720	3 670
Lighthouse services	92	25	58	31	71	98	73	449
Dredging services	349	236	2	2	2	92	2	686
Total (excl. borrowing cost)	**3 055**	**4 144**	**6 090**	**7 377**	**7 445**	**7 765**	**7 015**	**42 891**

Table 35: Multi-Year Ports Related Spending by Asset type

Asset Types	LE	Projections					
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Buildings and structures	524	531	845	904	656	677	680
Aircraft	-	152	167	170	15	-	-
Land	13	5	15	47	25	20	-
Machinery, equipment and furniture	623	435	745	312	264	298	436
Permanent way and works	16	124	200	198	73	144	-
Vehicles, Rolling stock & containers	-	10	16	44	22	-	-
Port Facilities	1 860	2 871	4 094	5 704	6 390	6 627	5 899
Other	-	-	-	-	-	-	-
Pipelines networks (etc)	19	16	8	-	-	-	-
Total (excl. borrowing cost)	**3 055**	**4 144**	**6 090**	**7 377**	**7 445**	**7 765**	**7 015**

Table 36: Multi-Year Port Related Spending per Commodity

Major Commodity	LE	Projection						
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Total 7yr
	Rm							
Containers	350	666	1 142	2 405	3 547	3 521	3 032	14 663
Liquid Bulk	196	342	1 301	1 143	629	868	595	5 074
Iron Ore	7	134	518	887	1 102	700	396	3 744
Coal	-	-	3	1	5	119	10	138
Manganese	24	256	208	5	-	-	80	574
Break Bulk	474	391	36	52	25	58	505	1 541
Automotive	-	-	-	-	-	-	-	-
Fleet - craft	343	530	261	320	582	915	720	3 670
Dredging Services	349	236	2	2	2	92	2	686
Other (incl LHS)	1 312	1 588	2 618	2 563	1 554	1 493	1 673	12 802
Total (excl. borrowing cost)	**3 055**	**4 144**	**6 090**	**7 377**	**7 445**	**7 765**	**7 015**	**42 891**

Table 37: Total Ship Repairs

Details	LE	Projections						
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Total 7yr
	Rm							
Total Ship repair	262	317	456	239	45	20	177	1 516

ANNEXURE C: Operating Expenditure

Table 38: Operating Expenditure

Cost Category	Actual 2014/15 R Million	Budget 2015/16 R Million	Forecast 2016/17 R Million	Dev '15/16 vs 16/17 R Million	Dev '15/16 vs 16/17 Percentage	% of Opex 15/16	Forecast 2017/18 R Million	Forecast 2018/19 R Million	CAGR 2016/17 - 2018/19
Labour Costs	1 909	2 219	2 571	352	16%	53%	2 783	2 931	7%
Rates & taxes	316	363	397	34	9%	8%	443	456	7%
Maintenance	260	329	402	73	22%	8%	452	545	16%
Contract Payments	71	138	157	19	14%	3%	119	139	11%
Energy	440	488	554	65	13%	11%	622	693	12%
Professional services	18	51	56	5	10%	1%	73	89	26%
Material	76	85	104	20	23%	2%	112	124	9%
Computer & Info systems	122	147	157	10	7%	3%	175	201	13%
Rental	60	66	80	13	20%	2%	85	103	14%
Security costs	71	82	89	7	8%	2%	107	131	22%
Pre -Feasibility Studies	43	118	139	21	18%	3%	129	186	16%
Sundry operating costs	17	113	131	18	16%	3%	181	184	3%
Total operating cost (excluding depreciation)	***3 403***	***4 200***	***4 837***	***637***	***15%***	***100%***	***5 280***	***5 782***	***9%***
Group Costs	509	619	650	31	5%		687	721	5%
Total operating cost (Including Group Costs)	**3 912**	**4 819**	**5 487**	**668**	**14%**		**5 967**	**6 503**	**9%**

The Authority's total costs for FY 2016/17 is R 5 487m (inclusive of Group overhead costs).

The cost elements contributing significantly to the total operating expenditure includes Labour Costs, Energy, Maintenance, Rates & Taxes, Sundry Operating costs, Material, Computer & Info systems, Rental and Pre-Feasibility Studies.

The sections that follow provide a detailed explanation for each of the cost items per Table 38 above.

Labour Cost

Labour cost is a function of delivering on the Authority's mandate in terms of operating efficiently, oversight, project management and maintenance. The Authority remains a labour intensive organisation as it executes its key deliverables in terms of its mandate. Labour costs therefore forms a substantial portion of the overall operating expenditure, compromising of 53% of the total operating costs for FY 2016/17.

The expected growth of labour costs for FY 2016/17 is approximately 16% (R352m). The average growth in labour over the 3 year tariff application period amounts to 7%.

The key drivers for growth in labour costs are mainly as follows:

- ***Headcount***

In order to fully deliver on its mandate, the Authority requires additional resources. The table below highlights the forecasted total number of permanent employees:

Table 39: Total Number of Employees

Cost Category	Budget 2015/16	Forecast 2016/17	Deviation 15/16 vs 16/17	Deviation % 15/16 vs 16/17	Forecast 2017/18	Forecast 2018/19
Total Number of Employees	4 909	5 368	459	9.4%	5 448	5 501

The key drivers for growth in headcount is as a result of the following:

- increase in minimum manning levels of marine to 100% service and then to 120% to meet MOPS requirements;
- additional crew to man new craft being deployed by Dredging and Marine services;
- increase in the tugs used per shift due to increased shipping volumes in order to improve and ensure current marine service delivery at the ports of Dbn and RCB;
- increase in Enterprise Risk Management (ERM) personnel to ensure oversight and compliance with risk management requirements;
- trainers required to establish marine engineering schools in the Ports of Durban, Cape Town, Saldanha and East London;
- manning of port operational centres to ensure systematic views of port performance;
- the appointment of trainee helicopter pilots to in-house helicopter pilots; and
- port engineering, project management and procurement resources to create adequate port infrastructure capacity ahead of demand and maintaining existing and new assets.

- ***Remuneration***

Remuneration is made up of annual salary adjustments, and is directly influenced by the aforementioned growth in headcount.

- ***Training***

In order for the effective execution of its mandate, it is incumbent upon the Authority to ensure adequate training and development of human capital. Training and development is vital to ensure continuous growth and advancement of the Authority and therefore remains a priority.

To this end the Authority has embarked on the introduction of four (4) Marine Engineering schools at the Ports of Durban, Cape Town, Saldanha and East London. The objectives of the schools are to ensure the development of critical maritime and engineering technical skills in order to create a shift from international dependencies for the maintenance and expanding of marine fleet requirements.

The Authority has also ensured training of critical staff involved in monitoring and planning functions of the Joint Operations Centres (JOCs)

The Authority continues with the various training initiatives relating to marine cadet training, helicopter pilot training and aircraft maintenance & aircraft avionics training.

Rates and Taxes

Rates and taxes relate to municipal rates and are based on the methodology employed by the municipalities in accordance with the Municipal Rates and Taxes Act. An increase in this cost category is therefore not aligned to the inflation rate.

The increase in Rates and Taxes for FY 2016/17 is approximately 9% (R34m). The average growth in rates and taxes over the 3 year tariff application period amounts to 7%.

Maintenance

It is necessary for the Authority to ensure that port infrastructure and other assets are maintained in accordance with required engineering standards. Maintenance is essential in order to ensure continuity in operations and offer customers service certainty.

Maintenance is driven by planned maintenance, aged infrastructure, new infrastructure assets, new marine craft (routine maintenance) and increased maintenance focused on the ship repair business.

Increase in maintenance for FY 2016/17 is approximately 22% - R73m (with an average growth in maintenance over the three year period of approximately 16%) and is mainly attributed to the following:

- Refurbishment of ageing infrastructure;
- The National Infrastructure Maintenance Strategy (NIMS) provides maintenance benchmarks for State Owned Enterprises (SOE's) which is set at 5% of the book value of port infrastructure. The Authority currently spends approximately 1% of book value on port infrastructure with the aim to gradually align to benchmark level of 5%. The Authority intends on reaching an initial target of 2.5% over a three year period resulting in accelerated spending on maintenance;
- Changes to business operations have a direct result on the levels of maintenance required. As the port system continues to handle larger container vessels than it is designed to accommodate; frequent dredging of berths is required resulting in increased and additional maintenance of dredgers; and
- Ship repairs maintenance and refurbishment which involves the upgrading of existing facilities to ensure its sustained and efficient use. The refurbishment includes:
  - Civil: Concrete repairs, crane rail upgrade, water reticulation, enclosure;
  - Electrical: Optimisation of electrical network, components replacements; and
  - Mechanical: Crane refurbishment/replacement, pump and valve upgrades.

Contract Payments

The increase on contract payment for FY 2016/17 is approximately 14% with the average increase over the three year tariff application period is approximately 11%. This is attributed to the costs relating to Operation Phakisa in FEL1& FEL2 stages to the amount of R44.4m in FY 2015/16 and R 46.9m in FY 2016/17. Other costs contributing to contract payments include helicopter pilot services and hiring of an external dredger to assist with the backlog of dredging in Durban.

Energy

Energy costs are mainly attributable to the fuel and electricity consumption of the Authority. The increase in costs for FY 2016/17 is approximately 13% (R65m) and mainly due to the following:

- Average electricity tariff increases approved by the National Energy Regulator of South Africa (NERSA) for Eskom (12.69%) and municipal distributors (12.21%) for FY 2015/16 used as an indicative basis for FY 2016/17; and
- Additional fuel costs relating to the new marine craft including the new dredgers with capacities higher than the older craft.

The average increase over the three year period is approximately 12% and is mainly due to the anticipated higher electricity tariffs as Eskom continues to struggle to meet demand together with the fluctuations in the exchange rate inhibiting the benefits of lower oil prices.

Professional Services

Professional fees relate to internal and external audit fees (financial and operational/ environmental) and legal fees whilst the remainder relates to other professional services.

The increase in Professional services costs for FY 2016/17 is approximately 10% (R5m) with the average growth in costs over the 3 year tariff application period amounting to 26%.

The 10% (R5m) increase on professional services for FY 2016/17 is mainly due to the implementation of Operations Centres and the establishment of Joint Operations Centres (JOCs) to ensure visibility of the port system value chain enabling identification of challenges and timeous application of mitigation strategies.

Other professional fees relate to Operational Audits & Transnet Certification, and Real Estate projects relating to Land use audit projects, Anticipated Section 56 consultants and Investment Property Valuation Fees.

Material

Material costs relate to material used in the maintenance of marine fleet and civil maintenance and are therefore directly influenced by maintenance activity. The material costs increase in FY 2016/17 is 23% (R20m) with the average growth in material costs over the 3 year tariff application period amounting to 9%. The explanations provided above under **Maintenance** are applicable to the increased material costs.

Computer and Information Systems

Computer and information systems include network costs, software licences, information system support, development cost, computer consumables and on-going maintenance thereof.

The increase in computer and information systems costs for the FY2016/17 is marginally above inflation at 7% (R10m). The average growth in costs over the 3 year tariff application period amounts to 13%. The 7% (R10m) increase in computer and information systems costs is due to an inflationary adjustment of R7m with the remaining costs attributable to specific projects such as the establishment of JOCs, IPMS, new revenue systems, records management and desktop back-up automation.

Rental

Rental costs relates to the hiring of internal and external land and buildings and leasing of vehicles, equipment and furniture.

The increase in rental costs for the FY2015/16 is approximately 20% (R13m). The average growth in rental costs over the 3 year tariff application period amounts to 14%. The increase in rental costs between FY 2015/16 and FY 2016/17 is mainly due to the leasing of computer equipment, office space for JOCs and vehicle rentals for berthing, pilots, and water supply to vessels.

Security

Security costs relate to the use of private security firms at the ports and are expected to increase by 8% (R7m) for FY 2016/17. The slightly higher than inflation increase in costs is due to new/additional security contracts owing to the establishment of new operators.

Pre-Feasibility Studies

Pre-feasibility studies are undertaken to determine future capital investments in a pre-feasibility phase to determine the best alternative for construction, preliminary design work and costing to assess overall viability of the project.

The increase in pre-feasibility costs for FY 2016/17 is 18% (R21m) with the average increase over the three year period being approximately 16%.

The major capital projects of the Authority are highlighted in Table 28 above. Pre-feasibility study costs for FY 2016/17 includes studies relating to ship repair facilities for the port system in terms of the Operation Phakisa initiative.

Other projects, amongst others, included in the pre-feasibility study costs include long-wave mitigation measures, wind mitigation studies and land use planning studies.

Sundry Operating Costs

The detailed costs relating to sundry expenses are highlighted in Table 40 below. Sundry Costs include expenses relating to insurance, stationery and printing, transport, promotions and advertising, cleaning services, environmental and other miscellaneous operating expenditure.

Miscellaneous revenue captured under sundry operating costs relates to income received from penalties and levies raised by the Authority from time to time.

The main cost drivers relating to sundry expenses are as follows:

- Insurance costs (12%): Relate to the new marine craft and dredgers
- Printing & Stationary (16%): Owing to increased headcount numbers
- Promotions & Advertising (33%): Due to the development of a new marketing strategy

Further to the above, the request for proposals for the S56 projects and public hearings thereof will lead to increased environmental management, legal fees, printing/stationary, promotions and advertising and feasibility studies.

Table 40: The Authority's Sundry Operating Costs

Cost Category	Actual 2014/15 R Million	Budget 2015/16 R Million	Forecast 2016/17 R Million	Dev '15/16 vs 16/17 R Million	Dev '15/16 vs 16/17 Percentage	% of Opex 15/16	Forecast 2017/18 R Million	Forecast 2018/19 R Million	CAGR 2016/17 - 2018/19
External property anxilary costs revenue	(210)	(258)	(278)	(20)	8%	-6%	(295)	(318)	7%
Intra NPA recoveries	(223)	(329)	(358)	(29)	9%	-7%	(354)	(390)	4%
Intra cc recoveries	105	201	211	10	5%	4%	223	235	6%
Intra cc charges	56	54	58	3	6%	1%	61	65	-20%
Miscellaneous revenue	(30)	(71)	(71)	(1)	1%	-1%	(76)	(85)	9%
External Audit Fees	20	27	29	2	6%	1%	29	29	0%
Entertainment	9	15	17	1	9%	0%	18	19	6%
Environmental management	(72)	13	14	0	1%	0%	22	26	38%
Fines and Penalties	1	0	0	0		0%	0	0	6%
Health and Sanitation	29	36	42	6	16%	1%	44	47	6%
Insurance Operations	38	38	42	4	12%	1%	46	50	9%
Legal Costs - Tax Deductible	38	49	54	5	10%	1%	57	73	16%
Internal Audit	32	26	27	1	6%	1%	29	30	6%
Membership Fees	3	6	6	0	6%	0%	6	7	6%
Bank Charges	0	0	0	0	6%	0%	0	0	6%
Catering Costs	0	1	1	0	6%	0%	1	1	6%
Claims Paid	1	0	0	0	6%	0%	0	0	6%
Commission Paid	0	0	0	0	6%	0%	0	0	6%
Discount Allowed	2	0	0	0		0%	0	0	0%
Gifts	2	0	0	0	6%	0%	0	0	6%
License Fees	2	3	3	0	6%	0%	3	3	6%
Magazines, Books and Periodicals	0	0	0	0	6%	0%	0	0	6%
Newspapers	0	0	0	0		0%	0	0	0%
Nursery / Flower Expenditure	4	7	7	0	6%	0%	7	8	6%
Water	67	73	82	9	13%	2%	99	109	15%
Other 1	27	59	63	3	6%	1%	66	70	6%
Navigation, Landing and Parking	22	30	32	2	6%	1%	35	37	7%
Postage	0	0	0	0	5%	0%	0	0	5%
Printing and Stationery	11	15	17	2	16%	0%	18	19	6%
Promotions and Advertising	16	29	39	10	33%	1%	41	43	6%
RDP Costs / Social Investment	0	0	0	0		0%	0	0	0%
Regional Services Levies	0	0	0	0		0%	0	0	0%
Telecommunication Services : External	20	24	26	2	7%	1%	27	29	6%
Travel Benefits / Concessions	0	0	0	0		0%	0	0	0%
Transport Cost : External	1	2	2	0	7%	0%	3	3	6%
Travel - Local	27	35	38	3	9%	1%	41	43	6%
Travel - Overseas : Deductible	1	4	5	0	7%	0%	5	5	7%
Accommodation and refreshments	17	21	23	2	9%	0%	25	26	6%
Total sundry operating expenses	**17**	**113**	**131**	**18**	**16%**	**3%**	**181**	**184**	**3%**

Consulting Fees

The Authority's business warrants the use of subject specialists from time to time, which in some cases, may have to be sourced abroad at higher than normal consulting rates. For FY 2016/17 professional services will be required for various Section 56 processes including Operation Phakisa and planned outsourced developments. These expenses are grouped under consulting fees and illustrated in the table below:

Table 41: Breakdown of Other 1 Cost

Cost Category	Actual 2014/15 R Million	Budget 2015/16 R Million	Forecast 2016/17 R Million	Dev '15/16 vs 16/17 R Million	Dev '15/16 vs 16/17 Percentage	% of Opex 15/16	Forecast 2017/18 R Million	Forecast 2018/19 R Million	CAGR 2016/17 - 2018/19
Total Other 1	**27**	**59**	**63**	**3**	**6%**	**1%**	**66**	**70**	**6%**
Promat Levy	-	-	-	-	0%	0%	-	-	0%
Consulting Fees	2	33	34	2	6%	1%	36	38	6%
Credit Management Fees	-	-	-	-	0%	0%	-	-	0%
Inter Divisional Miscellaneous Leasing & Contract	0	0	0	0	6%	0%	0	0	5%
Capital Project Clearance	-	-	-	-	0%	0%	-	-	0%
Contributions	0	0	0	0	10%	0%	0	0	8%
Corporate Identity	0	3	3	0	10%	0%	3	3	6%
Bouquets & Wreaths	0	0	0	0	6%	0%	0	0	6%
Revenue Stamps & Other Taxes	-	-	-	-	0%	0%	-	-	0%
Sponsorships	11	4	4	0	6%	0%	4	4	6%
Corporate Social Investment	-	9	9	0	6%	0%	9	10	6%
Accounts Pay Clearance Account	-	-	-	-	0%	0%	-	-	0%
Suspense Account	-	0	0	0	6%	0%	0	0	6%
General Ledger Clearance Account	-	-	-	-	0%	0%	-	-	0%
Strike Related Cost	-	-	-	-	0%	0%	-	-	0%
Plant Hire Credits Sanction Work	-	-	-	-	0%	0%	-	-	0%
Interest Paid	2	0	0	0	6%	0%	0	0	5%
Conference: Portnet	0	1	1	0	6%	0%	1	2	6%
Foreign Exchange Cost	0	-	-	-	0%	0%	-	-	0%
Intra Pad Miscellaneous Charges	11	10	11	1	6%	0%	11	12	5%

Group Overhead Costs

The services provided by each Transnet corporate cost centre to the respective Operating Divisions (ODs) of Transnet vary in accordance with OD requirements and the nature of its activities. Transnet allocates these shared costs based on a top down costs centre allocation approach as opposed to a top down expenditure line item allocation approach.

This effectively means that total costs relating to a particular cost centre are allocated to the ODs using a cost driver predetermined by and agreed with the cost centre managers for that particular cost centre and this consequently informs the allocation of the expenditure line items such as personnel costs, fuel costs etc. within that cost centre.

Furthermore, where possible, identified costs per general ledger account that could be traced to ODs are allocated directly without the use of predetermined cost drivers. An example in this regard is the Incentive bonuses provision, Impairments on trade receivables and Other internal income recoveries in the FY 2016/17 allocation.

Year on year differences in allocated corporate overhead costs or differences between budgeted corporate overhead costs allocations and actual corporate overhead costs allocations will always be primarily as a result of changes in the base rand amounts (e.g. budgeted corporate overhead costs versus actual corporate overhead costs per cost centre) as well as changes in cost driver percentages (per cost centre) with cost driver remaining the same.

Table 42: Group Overhead Costs

Transnet Group Costs							
Details	FY 2014/15 Actuals	FY 2015/16 Budget	FY 2016/17 Projections	Dev FY 15/16 vs 16/17	Dev FY 15/16 vs. 16/17 (%)	FY 2017/18 Projections	FY 2018/19 Projections
Revenue external	(1)	-	-	-	-	-	-
Revenue internal	-	-	-	-	-	-	-
Internal recoveries	(8)	-	-	-	-	-	-
Revenue	**(9)**	**-**	**-**	**-**	**-**	**-**	**-**
Net operating expenses excluding depreciation and amortisation	**468**	**544**	**573**	**29**	**5.31%**	**606**	**635**
Personnel costs	215	248	256	7	2.90%	266	282
Fuel costs	0	0	0	0	3.90%	0	0
Electricity costs	2	1	1	0	1.99%	1	2
Material costs	0	0	0	0	4.32%	0	0
Other operating costs	250	293	315	22	7.37%	337	351
Accommodation and Refreshments	3	4	4	0	3.04%	4	4
Professional Fees	91	78	82	3	4.42%	86	91
Electronic Data Costs	42	21	24	3	11.95%	28	29
Internal Audit	26	25	26	1	4.61%	28	29
Social Investment	29	37	38	1	1.72%	46	42
Miscellaneous Costs	59	127	141	14	10.75%	147	156
Profit from operations before depreciation, amortisation and items listed below	**459**	**544**	**573**	**29**	**5.31%**	**606**	**635**
Depreciation and amortisation	26	46	47	2	3.96%	50	53
Profit from operations before the items listed below	**485**	**589**	**620**	**31**	**5.21%**	**656**	**688**
Profit on sale of interest in businesses	-	-	-	-	-	-	-
Impairment of assets	-	-	-	-	-	-	-
Dividends received	-	-	-	-	-	-	-
Post-retirement benefit obligation costs	22	26	27	**0**	**1.72%**	28	30
Fair value adjustments	(0)	0	0	**0**	**6.82%**	0	0
Income from associates	-	-	-	-	-	-	-
Profit from operations before net finance costs	**507**	**616**	**647**	**31**	**5.06%**	**684**	**718**
Transnet Capital Projects	2	3	3	0	7.70%	3	3
Transnet Foundation	0	-0	(0)	-0	187.96%	(0)	(0)
Transnet Corporate Overhad Costs: NPA	**509**	**619**	**650**	**31**	**5.04%**	**687**	**721**
YOY % Increase	**1.1%**	**21.6%**	**5.0%**			**5.7%**	**5.0%**

The average increase in Group costs from FY 2015/16 to FY 2016/17 is below inflation at approximately 5.0%. Group costs over the tariff period increase in line with inflation.

The key drivers of the operating expenses are summarised as follows:

- **Electronic data costs** (LAN, WAN etc.) increase by 11.95% from R21.2m in FY 2015/16 to R23.8m in FY 2016/17 mainly as a result of increased budgeted costs that relate to data communication, software and data services etc.
- **Miscellaneous costs** increased by 10.75% from R127.4m in FY 2015/16 to R141.1m in FY 2015/16. Miscellaneous costs is made up of a variety of costs such as rates and taxes, promotions and advertising, bank charges, enterprise development costs, administration costs etc.

ANNEXURE D: Additional Operating Cost Information

The Tariff Methodology states that the Authority must submit detailed and complete motivation for each of the expenses applied for, especially on large items like labour and energy costs. In compliance with the Tariff Methodology, additional information requested is illustrated below:

1. ***Estimations on internal transfers and payments within the Transnet Group and clarity on cash holdings and resulting benefits :***
   - *Transnet's Cash Management Policy and practice is to sweep all cash balances, both positive and negative, to a central treasury account which is under the administration of Group Treasury. The swept balances are then processed to the Group Current Account within the Authority's accounting records with the equal and opposite entry being processed in the Group accounting records. At present the Authority is in a net borrowing position due to the various intercompany entries that are processed thorough the Current Account i.e. intercompany expenses, project costs, re-gearing dividends, sweeping of cash balances, interest on Group Current Account etc. Should the Authority have positive cash balance and this is swept to the Group Current Account it would result in the Authority owing Transnet Group less and hence a lower interest cost will be charged at the end of the respective month and vice versa.*
   - *Internal transfers relating to labour is demonstrated in Table 47 below.*

2. ***The number of posts in the approved establishment (organogram)***

Table 43: Number of employees

Amount of posts in the approved establishment	
Approved posts end June 2015 (organogram)	4 685
Budgeted Posts FY 2015/16	4 909

3. ***Current employees***

Table 44: Current Employees

Current Employees	
Number of Permanent employees as at end June 15	3 980
Total Labour Cost for June 2015 (R'm)	145

4. *Vacant Posts*

Table 45: Vacancy Posts

Vacant Posts	
Vacant posts end June 2015 (Organogram)	705
Budgeted Vacant Posts FY 2015/16	929

5. *The percentage of posts of the total for each of the years that have been vacant over the last 5 years (number and cost)*

Table 46: Vacancy Rate

TNPA Employees	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15
Total permanent number of staff - Budgeted in that year	3 711	3 587	4 044	4 409	4 455
Total permanent number of staff - Actual in that year	3 258	3 422	3 584	3 802	3 942
Vacancies	453	165	460	607	513
Vacancy Rate	12.2%	4.6%	11.4%	13.8%	11.5%

6. *The value of services/labour that is "purchased" from Transnet group or any of its divisions*

Table 47: Services/Labour purchased from Transnet Group

Cost Category	2010/11		2011/12		2012/13		2013/14		2014/15		2015/16	2016/17
	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Budget R'Million	Budget R'Million
Inter Transnet Repairs & Maintenance	83.76	74.23	97.60	77.51	73.34	85.77	93.48	87.93	72.99	64.93	67.51	70.66
Inter Divisional Repairs & Maintenance	3.97	4.07	2.71	3.74	3.66	4.11	2.51	4.92	4.00	4.20	5.63	6.12
Intra POD Repairs & Maintenance												
Intra PAD Repairs & Maintenance	18.38	14.69	17.33	15.58	19.09	15.65	27.19	23.70	19.97	23.44	27.46	28.13
Inter Transnet: Prof, Tech & Admin	2.39	6.02	2.87	6.44	4.50	8.04	9.77	8.21	4.72	8.83	13.28	15.61
Inter Divisional: Prof, Tech & Admin	0.36	1.11	0.53	1.05	0.68	0.76	0.64	0.79	0.56	0.68	0.55	0.58
Inter Divisional Miscellaneous Leasing & Contract	0.00	0.02	-	-	-	-	0.02	-	0.02	0.02	0.03	0.03
Intra Pad Miscellaneous Charges	1.55	1.53	3.01	3.69	8.36	9.17	9.09	7.29	10.73	7.03	9.97	10.52
Operational Outsourcing: Inter Transnet	-	0.00	-	-	-	-	-	-	-	-	-	-
Inter Transnet: Cargo Handling Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Operating Leases Internal(Subsidiaries):Land	1.75	2.15	2.22	2.20	2.69	2.54	3.08	3.21	3.79	3.47	4.37	4.86
Operating Leases Internal(Subsidiaries):Buildings & Structur	4.52	4.65	4.96	5.08	5.38	5.53	4.12	6.76	6.44	4.62	4.66	5.06
Operating Leases Internal(Subsidiaries):Machinery,Equipment	0.72	1.38	0.67	3.92	13.15	4.61	(1.03)	4.30	1.49	3.51	2.73	2.90
Operating Leases Internal(Subsidiaries):Vehicles	2.57	4.08	2.96	3.18	2.61	2.94	2.72	2.97	2.75	4.19	5.23	5.72
Operating Leases Internal(Divisions)	-	-	-	-	-	-	-	-	-	-	-	-
Fees: Internal	5.01	5.92	7.02	4.94	1.73	4.88	2.37	(4.19)	0.70	0.13	0.25	0.26
Fees: Inter Divisional	0.02	0.11	0.03	0.15	-	0.34	-	-	-	-	(72.16)	(76.20)
Training - internal trainer costs	-	-	-	-	0.75	-	1.80	3.14	1.05	1.43	3.59	3.83
Training - internal trainer costs	-	-	-	-	-	-	-	0.11	-	0.04	-	-
Training - internal trainer costs	-	-	-	-	0.05	-	0.82	1.75	3.22	1.04	2.49	3.20
Training - internal trainer costs	-	-	0.02	-	0.02	-	0.13	0.56	0.08	0.30	0.60	0.64
Training - internal trainer costs	-	-	-	-	-	-	-	0.08	-	0.38	0.18	0.19
Training - internal trainer costs	-	-	-	-	-	-	-	0.05	-	0.20	0.28	0.31
Total	125.00	119.97	141.92	127.49	136.01	144.33	156.71	151.61	132.52	128.45	76.64	82.41

7. ***The value of services/labour that is provided by the NPA to Transnet or any of its divisions without recovery of the costs of providing such labour/service***

The Authority does not have any services it provides without recovery

8. ***The split between expenditure on electricity and other kinds of energy (liquid fuels etc.)***

Table 48: Split of Energy Sources

Cost Category	2010/11		2011/12		2012/13		2013/14		2014/15		2015/16	2016/17
	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Actual R'Million	Budget R'Million	Budget R'Million	Budget R'Million
Petrol	3.80	4.07	4.86	4.43	5.23	5.26	5.78	5.94	6.18	6.97	8.05	8.55
Diesel	75.58	75.59	99.05	90.94	115.52	111.02	133.36	134.50	157.06	142.72	159.78	185.53
Oil & Lubricants	4.28	4.02	5.22	3.10	4.29	3.98	5.26	4.96	6.32	6.09	7.43	8.01
	83.66	83.67	109.12	98.48	125.03	120.26	144.40	145.40	169.57	155.78	175.26	202.08
Electricity	131.79	147.22	165.28	180.46	227.74	254.15	254.57	299.49	270.00	268.11	313.12	351.58
	131.79	147.22	165.28	180.46	227.74	254.15	254.57	299.49	270.00	268.11	313.12	351.58
Total Energy	**215.45**	**230.90**	**274.40**	**278.94**	**352.77**	**374.42**	**398.96**	**444.88**	**439.57**	**423.89**	**488.39**	**553.66**

ANNEXURE E: Required Revenue Calculation Based on Bilateral Contracts at Contract Rates

- ***Required Revenues & Tariff Adjustment***

The application of the approved Tariff Methodology together with the approach used in the Tariff Application FY 2015/16 of including the bilateral contracts at the official contract rates results in Required Revenues of R11 968m. The detailed calculations are highlighted below:

Table 49: RR based on inclusion of bilateral contracts at contract rates

Details	FY 2015/16 ROD R'm	FY 2016/17 Fixed Tariff Year R'm	FY 2017/18 Indicative Tariff Years R'm	FY 2018/19 Indicative Tariff Years R'm
RAB	66 789	73 486	80 329	89 206
Vanilla WACC	6.38%	5.31%	5.56%	5.63%
Return on Capital	4 261	3 902	4 466	5 022
Plus: Depreciation	1 791	1 928	2 117	2 355
Plus: Operating Costs	5 020	5 487	5 967	6 503
Plus: Taxation Expense	768	1 111	1 046	1 209
Plus/(Less): Clawback	(581)	(460)	156	-
Plus/(Less): ETIMC	(150)			
Revenue Allowed	***11 109***	**11 968**	**13 752**	**15 089**
Less: Real Estate	(2 449)	(2 600)	(2 874)	(3 147)
Marine Revenue	***8 660***	***9 368***	***10 878***	***11 942***

This translates into an average tariff adjustment of 8.93% as demonstrated below:

Table 50: Marine Revenue for FY 2016/17 based on inclusion of bilateral contracts at contract rates

Marine Revenue	FY 2016/17 Fixed Tariff Year R'm	FY 2017/18 Indicative Tariff Years R'm	FY 2018/19 Indicative Tariff Years R'm
Prior Year Revenue	8 390	9 368	10 878
Estimated Volume Growth	2.50%	3.30%	2.70%
Revenue after volume growth	8 600	9 677	11 172
Required Revenue	9 368	10 878	11 942
Tariff Increase	**8.93%**	**12.41%**	**6.89%**

- ***Clawback Calculations***

The inclusion of the bilateral contracts at contract rates further impact the quantum of the clawback. The resultant clawback calculations are highlighted in the tables that follow:

Table 51: Clawback FY 2014/15 based on bilateral contracts at contract rates

Actual Clawback	FY 2014/15 R'm
Re-computed Revenue Requirement	**10 059**
2014/15 AFS Revenue	10 469
Clawback FY 2014/15	(410)
Provisional allowed in ROD FY 2015/16	(174)
Final Clawback FY 2014/15	**(584)**

Table 52: Estimate Clawback FY 2015/15 based on bilateral contracts at contract rates

Estimate Clawback	FY 2015/16 R'm
Allowed Revenue per ROD FY 2015/16	11 109
Latest Estimate Revenue	10 797
Estimated Clawback	312
50% Clawback Adjustment in FY 2016/17	**156**
Total Clawback due to customers FY2015/16	
Clawback FY 2014/15	(584)
Return on Clawback FY 2014/15	(32)
Estimate Clawback FY 2015/16	156
Net Clawback FY 2016/17	**(460)**
Clawback Adjustment for FY 2015/16 in FY2017/18 due to the Authority	
50% Clawback Adjustment in FY 2017/18	156

- ***Tax Computation***

The aforementioned clawback calculations impact the tax computation as follows:

Table 53: Tax computation for scenario based on bilateral contracts at contract rates

DETAILS	FY 16/17	FY 17/18	FY 18/19
Gross Income	***9 479***	***11 043***	***11 967***
Pre Tax debt return	-	-	-
Equity Return on RAB	2 524	2 803	3 109
ETIMC	-	-	-
Clawback	(460)	156	-
Depreciation	1 928	2 117	2 355
Opex	5 487	5 967	6 503
Deductions	***6 955***	***8 240***	***8 858***
Depreciation	1 928	2 117	2 355
Opex	5 487	5 967	6 503
ETIMC	-	-	-
Clawback	(460)	156	-
Taxable income	***2 524***	***2 803***	***3 109***
Gross up for tax	3 506	3 893	4 318
Tax at 28%	***982***	***1 090***	***1 209***
Tax on Clawback	129	(44)	-
Tax on ETIMC	-	-	-
Tax Allowance	**1 111**	**1 046**	**1 209**

End.