Tariff Application Financial Year 13/14

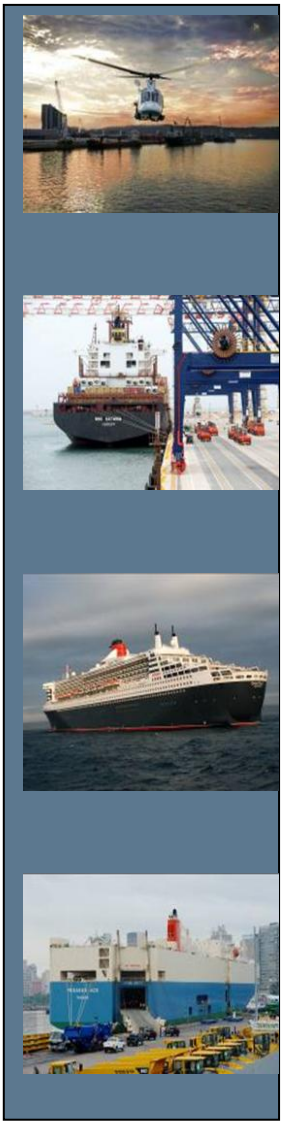
Tariff application to the Ports Regulator in terms of the National Ports Act, 2005

(Act No. 12 of 2005)

September 2012

Contents

List of Tables and Diagrams



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

The tariff application FY 2013/14 has been prepared using the revenue requirement methodology. In terms of the methodology, the revenue requirement approach is defined as follows:

Revenue Requirement = **(Regulatory Asset Base ("RAB") X Weighted Average Cost of Capital) + Operating Costs + Depreciation + Taxation Expense –(+) Claw back +(-) Excessive Tariff Increase Margin Credit + Financing factor**

Application of the methodology is illustrated in the table below:

Table 1: Revenue requirement model

Description	FY 13/14 Rm
RAB	66 315
Real Vanilla WACC	8.33%
Return on Capital	5 525
Plus: Depreciation	1 659
Plus: Operating Expense	3 953
Plus: Taxation Expense	1 242
Less: Clawback	(1 402)
Plus: ETIMC	-
Revenue Requirement	10 978
Less: Real Estate	(1 856)
Total Net Revenue Required	9 122

Application of the Revenue Requirement formula results in a revenue requirement of R10 978m **(Table 1)** comprising of Real Estate business revenue of R1 856m and Marine business revenue of R9 122m. In order to determine Marine Business revenue to be derived from tariff adjustments, the required revenue of R9 122m is compared with the expected revenue for FY 2012/13 increased for the expected growth in volumes for FY 2013/14. This translates to an average tariff adjustment of 14.2% for FY 13/14.

The roll-out of the Authority's CAPEX programme in terms of the market demand strategy will result in spikes and troughs for future tariff adjustments when applying the Revenue Requirement formula. The Authority's projection of future tariff adjustments (beyond FY 2013/14) using similar parameters for FY 2013/14 will range between 5% and 16% per annum. A multi-year tariff application approach could assist with introducing a more smooth tariff trajectory over the same period which equates to 9.68% per annum for each of the FY's 2014/15 – FY 2018/19.

However current regulations do not accommodate for a multi-year tariff application approach. This will need to be considered as part of the tariff methodology agreement process between the Authority and the Regulator.

Revenue requirement determination on the multi-year basis for FY 2014/15 to FY2018/19 (9.68%) results in a tariff adjustment of approximately CPI+4%. Whilst the Authority understands its role in facilitating economic growth by providing infrastructure as part of the market demand strategy it is also mindful of Transnet's commitment to reducing the cost of doing business in South Africa. The Authority has undertaken various financial assessments together with Transnet in anticipation that a multi-year tariff application approach will be adopted by the next tariff application FY 2014/15. Despite its aggressive CAPEX program the organisation could sustain a 8.5% per annum tariff adjustment (CPI + 3%) over the remaining years of the Transnet MDS. (The Authority's CAPEX

program does not include the cost of construction of the envisaged port to be located at the old Durban International Airport site).

Due to the non-finalisation of the tariff methodology and with the assumption that a multi-year tariff application of CPI + 3% will be considered next year; the Authority proposes to cap the Revenue Requirement for FY 2013/14 to R10 275m:

Table 2: Capped Revenue Requirement

Description	Rm
Revenue Requirement	10 275
Comprising of:	
Real Estate	1 856
Marine business	8 419

This translates to a 5.4% tariff adjustment as follows:

Table 3: Capped Revenue Requirement of 5.4%

Description	**Rm**
Tariff book revenue 12/13	8 490
Less Cargo Dues export program discount	(1 000)
Estimated revenue 12/13	7 490
Volume growth 13/14 at 12/13 tariff book rates	498
Forecasted revenue before tariff adjustment	7 988
Marine business	8 419
Tariff Adjustment	5.4%

A tariff adjustment of 5.4% for FY 2013/14 together with a multi-year tariff determination of CPI + 3% per annum translates to an average tariff adjustment of CPI + 2.5% over the 6 years of the Transnet MDS FY 2013/14 – FY 2018/19. Such an increase is considered reasonable given the Authority's aggressive capital expansion program of R46.9bn which commenced in FY 2012/13.

In translating the Marine Business revenue of R8 419m (informed by the capped revenue requirement of R10 275m) into individual tariffs; the Authority proposes the introduction of certain pricing amendments informed by the recently developed pricing strategy. These amendments include a minimum tariff of R6.00 per ton for dry bulk and break bulk commodities, reduction in certain containers and automotives tariffs with the remainder of the quoted tariffs increasing by 5.4% relative to FY 2012/13 tariff book levels.

2 Introduction

The Transnet National Ports Authority, a division of Transnet SOC Limited ("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 activity of the Authority is 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.

The regulatory framework for the Authority's tariffs is informed by the National Ports Act, Regulations issued under such Act and the Directives promulgated by the Ports Regulator. In terms of the regulatory framework 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.

This 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 for FY13/14 has been prepared using the Revenue Requirement approach with the determinants for the Authority's revenue being described accordingly. Once the required revenue has been established the application proposes a tariffing approach to be incorporated into the Authority's tariff book and concludes with an overview of port efficiency focus.

3 Legal Basis and Regulatory Requirements

3.1 Section 72 of the Act sets out 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.

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, Saldanha Bay, Cape Town, Mossel Bay, East London, Port Elizabeth, Durban, Richards Bay, Ngqura and Port Nolloth.

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, containers, automotive, steel, fruit, ferrochrome, petroleum products and manganese. Growth of these commodities is a function of global demand, logistics infrastructure capacity and supply chain efficiencies which include port efficiencies.

4.2 The 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 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 as follows:

Table 4: The Authority's Core Functions

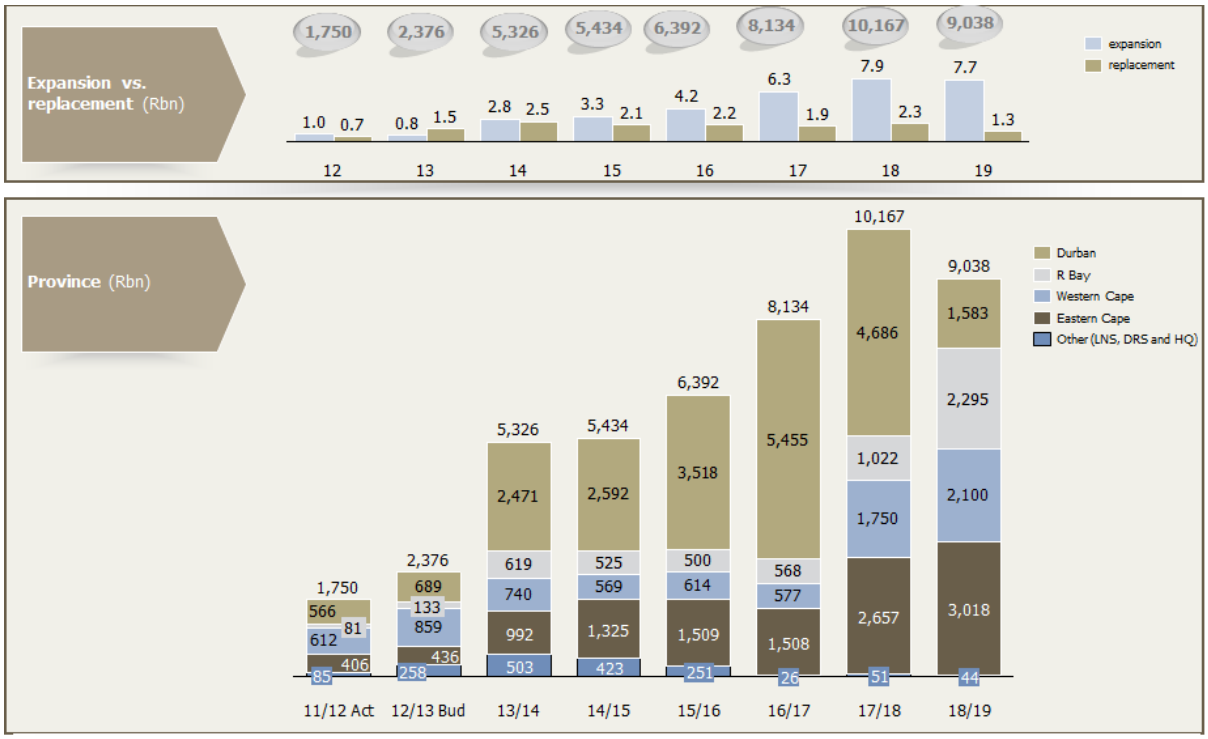
Function	Detail
Landlord	Promote the use, improvement and development of ports, and control land use within the ports, having the power to lease port land under conditions it determines.
Master planner	Plan, improve, develop and maintain port infrastructure.
Controller of ports navigation	Make and apply 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 Market Demand Strategy (MDS)

The South African ports occupy a central position in the transport and logistics chain and with 98% of cargo volume passing through them annually, ports are inherently required to play a leading role in influencing economic growth through a responsive market demand strategy.

The MDS anticipates a R300bn capital expenditure program over 7 years with the Authority making up R46.9bn thereof. To enhance its finance and funding strategy, Transnet intends to build the confidence of its funders and develop both new and existing options to optimise and diversify funding as the Company will need to raise approximately R86.5bn on the debt capital market without the assistance of Government guarantees which requires it to maintain a strong balance sheet. Funding for FY 2012/13 has been secured and the focus now remains on cost effective funding for FY 2013/14 and beyond which implies maintaining its investment credit rating by ensuring gearing and cash interest cover rates are maintained within set limits.

Diagram 1: MDS Capex Spend



The MDS will enable growth in key commodities and will position South Africa globally as a key thermal coal exporter, an increasingly important 4th largest supplier of iron ore to China, leading manganese exporter globally, and the leading logistics hub for sub-Saharan Africa as well as a globally recognised benchmark for container and heavy haul operations.

The majority of the MDS's investments will be in general freight and Transnet Freight Rail. This will result in additional capacity across all commodities. There will be strong growth in the general freight sector and improvement in rail activity, ensuring that 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 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 adequate port infrastructure capacity ahead of demand to enable cargo volume growth;
- Improve port efficiencies; and
- Assume a collaborative role with a view to enhance port integration and influence market growth

In fulfilling its role in the Transnet strategy, the Authority provides port infrastructure[1] and marine-related services[2], including the management of port activities and the port regulatory function, in a landlord capacity. The Authority is responsible for the safe, efficient and effective economic functioning of the national ports system, which it manages, controls and administers on behalf of the State.

As the custodian of the country's primary trading hubs, the Authority manages the most vital conduits of the country's imports and exports, ensuring the provision of port services and port facilities to port users. 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.

The Authority provides port users with a combination of port infrastructure facilities and services. Each port has a natural hinterland with defined markets, which determines the nature of services and facilities, and the types of cargoes handled at each port. Hence, each port operates and develops its own specialized services within a complementary port system to support a defined customer base.

The ports handle in excess of 98% of the country's imports and exports and play a pivotal role in international trade by providing suitable port infrastructure to grow the country's imports and exports. The Authority's future and sustainable business performance is thus integral to the well-being of the South African economy.

4.4 Tariffs in perspective

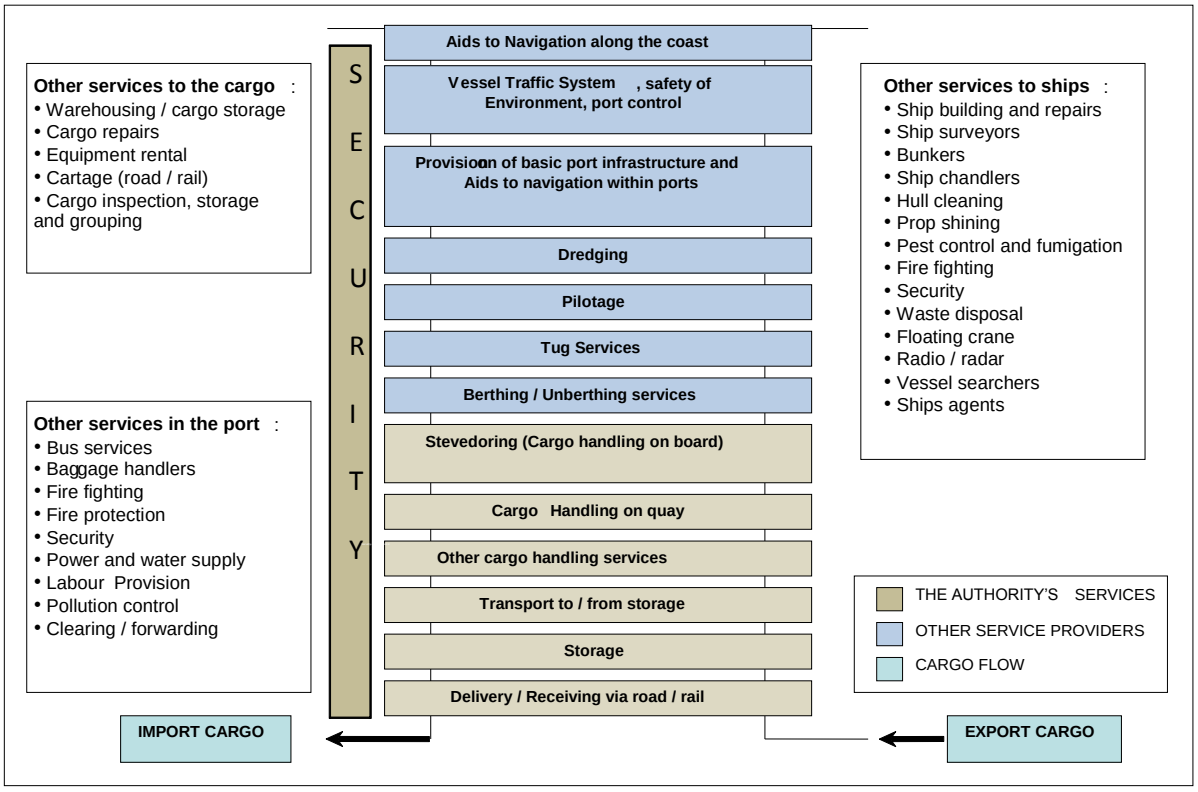
The Authority, like any other port authority, needs to generate revenue by charging tariffs for the services that it renders, in order to achieve the aforementioned MDS targets. The Authority may charge fees, in accordance with tariffs approved by the Regulator in order to fulfil the functions it must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

[1] Port Infrastructure means the basic structure of a port, including breakwaters, seawalls, channels, basins, quay walls, jetties, roads, railways and infrastructure used for the provision of water, lights, power, sewerage and similar services.
[2] Pilotage, tug services and berthing

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 5: 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 as well as the cranes utilised in such 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 and the Act, the revenue generated from the Authority's services is utilised inter alia to:

- maintain basic port infrastructure;
- provide current and 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. These are explained in the table below:

Table 6: The Authority's Tariff Definitions

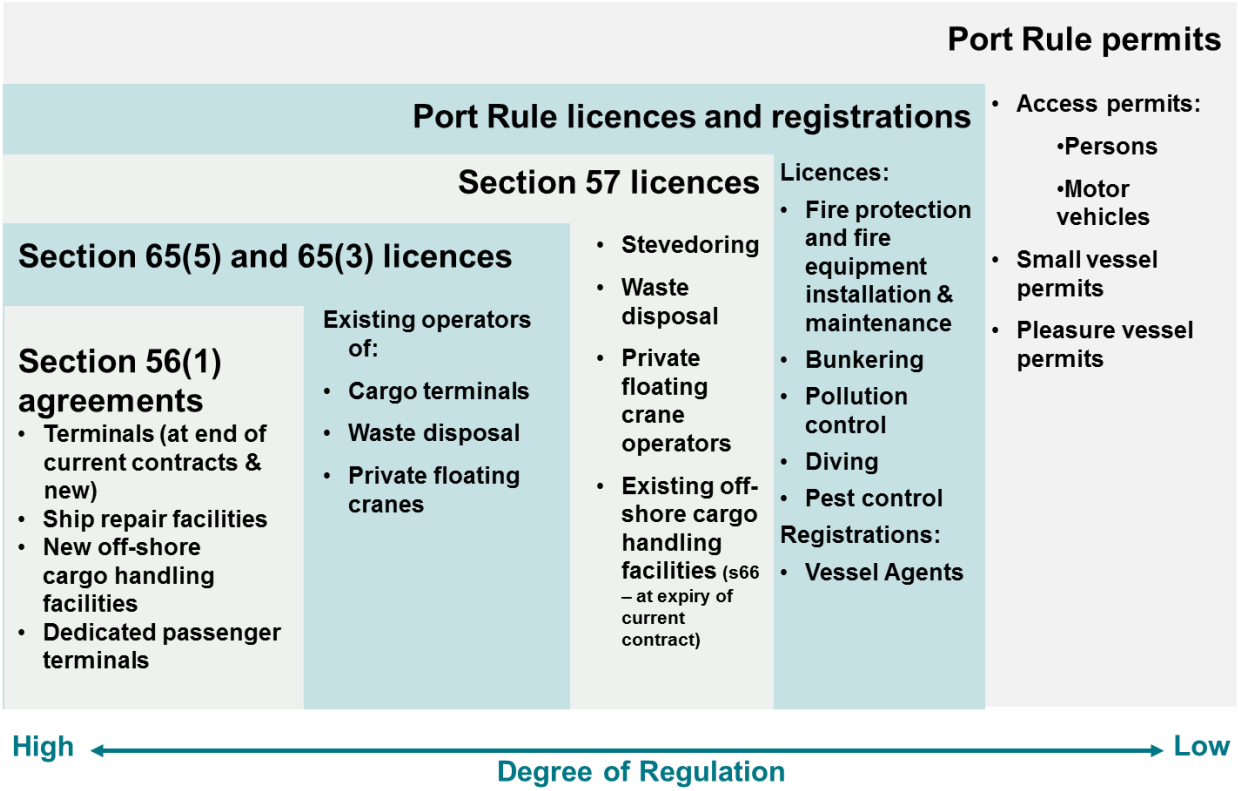
Tariffs	Service Rendered	Application
Light dues	The provision of navigation aids to vessels along the South African coast	Raised per vessel (per gross ton) at the first port of call (Tariff Book Section 1)
Vessel Traffic Services	The provision of vessel traffic services, safety of the port environment 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 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[3]	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 syncrolift fees	Raised per service for the use of a facility, based on the size of the vessel (per gross ton) (Tariff Book Section 6)

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 **Diagram 3**:

[3] 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.

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. The 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 7: Authority's Licence 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)

5. Port infrastructure development plan and capital expenditure required

5.1 Port investment planning

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

"**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 program

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. The following broad strategies of the Authority are aimed at supporting MDS and volume growth:

- Improve management and delivery of capital projects :
- Ensure compliance to Project Lifecycle Process (PLP) model;
- Implement Enterprise Programme Management Office (EPMO) to track capital projects;
- 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;
- Improve land and other asset utilization;

Table 8: Port-related Investment spending

	Budget 2012/13 Rm	Projections 2013/14 Rm
Richards Bay	133	619
Durban	689	2 471
East London	72	105
Ngqura	148	620
Port Elizabeth	217	267
Mossel Bay	3	6
Cape Town	396	360
Saldanha	460	373
Dredging	88	459
Lighthouse	79	22
Other	92	23
Total (excl. borrowing cost)	**2 376**	**5 326**

Table 9: Strategic Capital Objectives

		Budget 2012/13 Rm	Projections 2013/14 Rm
Re-engineering, Integration, Productivity and Efficiency	To maximise return on investments by obtaining additional volumes	684	2,354
	To maximise return on investments by improving operating efficiencies	221	801
	To preserve current revenue streams without obtaining additional volumes (i.e. revenue protection)	1,136	1,655
Safety, Risk and Effective Governance	Ensure Safety Optimisation	206	422
	Optimise Business Enterprise Offerings	76	18
	Optimally Satisfy Social Investments (non-economic value creating projects)	31	13
	Environmental	3	46
Human Capital	Optimise Human Resources	18	17
Total (excl. borrowing cost)		**2 376**	**5 326**

Table 10: Expansion vs. Sustaining Capex Requirements

	Budget 2012/13 Rm	Projections 2013/14 Rm
Expand Business :		
- Growth initiatives	832	2,811
Maintain current Business :		
- Replacement Efficiency/ Service Quality	1,543	2,515
Total (excl. borrowing cost)	**2 376**	**5 326**

Table 11: Capex Spend by Asset Type

	Budget 2012/13 Rm	Projections 2013/14 Rm
Buildings and structures	440	1,140
Land	30	93
Machinery, equipment and furniture	172	123
Permanent way and works	166	283
Vehicles, Rolling stock & containers	1	-
Port Facilities	1,566	3,687
Total (excl. borrowing cost)	**2 376**	**5 326**

Table 12: Capex Spend by Major Commodity

Major Commodity	Budget	Projections
Commodity	**2012/13**	**2013/14**
	Rm	**Rm**
Containers	701	1 562
Liquid Bulk	135	472
Iron Ore	60	165
Coal	13	-
Manganese	36	18
Break Bulk	150	503
Automotive	-	-
Fleet - craft	577	617
Dredging Services	87	459
Other (incl LHS)	616	1 530
Total (excl. borrowing cost)	**2 376**	**5 326**

Table 13: Capex Spend by per Port Service / Facility

	Budget	Projections
	2012/13	**2013/14**
	Rm	**Rm**
Infrastructure	1,632	4,228
Marine services	577	617
Lighthouse services	79	22
Dredging services	87	459
Total (excl. borrowing cost)	**2 376**	**5 326**

Table 14: Capex Spend by Major Commodity per Port 2012/13

Commodity	TNPA Budget 2012/13 Rm	RCB Budget 2012/13 Rm	DBN Budget 2012/13 Rm	EL Budget 2012/13 Rm	NGQ Budget 2012/13 Rm	PE Budget 2012/13 Rm	MSB Budget 2012/13 Rm	CPT Budget 2012/13 Rm	SLD Budget 2012/13 Rm	LHS Budget 2012/13 Rm	DRS Budget 2012/13 Rm	HO Budget 2012/13 Rm
Containers	701	-	269	-	125	-	-	306	-	-	-	-
Liquid Bulk	135	2	101	-	12	-	-	20	-	-	-	-
Iron Ore	60	-	-	-	-	-	-	-	60	-	-	-
Coal	13	0	-	13	-	-	-	-	-	-	-	-
Manganese	36	-	-	-	-	36	-	-	-	-	-	-
Break Bulk	150	-	142	-	8	-	-	-	-	-	-	-
Fleet - craft	577	41	27	-	-	133	-	16	360	-	-	-
Dredging Services	87	-	-	-	-	-	-	-	-	-	87	-
Other (incl. LHS)	616	90	150	59	3	48	3	54	40	79	-	92
Total (excl. borrowing cost)	**2 376**	**133**	**689**	**72**	**148**	**217**	**3**	**396**	**460**	**79**	**87**	**92**

Table 15: Capex Spend by Major Commodity per Port 2013/14

Commodity	TNPA F/Cast 2013/14 Rm	RCB F/Cast 2013/14 Rm	DBN F/Cast 2013/14 Rm	EL F/Cast 2013/14 Rm	NGQ F/Cast 2013/14 Rm	PE F/Cast 2013/14 Rm	MSB F/Cast 2013/14 Rm	CPT F/Cast 2013/14 Rm	SLD F/Cast 2013/14 Rm	LHS F/Cast 2013/14 Rm	DRS F/Cast 2013/14 Rm	HO F/Cast 2013/14 Rm
Containers	1,562	-	873	-	520	9	-	160	-	-	-	-
Liquid Bulk	472	2	380	-	21	-	-	66	3	-	-	-
Iron Ore	165	-	-	-	-	-	-	-	165	-	-	-
Manganese	18	-	-	-	-	18	-	-	-	-	-	-
Break Bulk	503	-	466	-	2	35	-	-	-	-	-	-
Fleet - craft	617	163	119	-	-	143	-	26	165	-	-	-
Dredging Services	459	-	-	-	-	-	-	-	-	-	459	-
Other (incl. LHS)	1 530	454	633	105	77	61	6	108	41	22		23
Total (excl. borrowing cost)	**5 326**	**619**	**2 471**	**105**	**620**	**267**	**6**	**360**	**374**	**22**	**459**	**23**

Table 16: Selected Projects by Value

Project	Approved ETC	7 yr planned spending	Corridor	Budget 2012/13	Projections 2013/14
	Rm	Rm		Rm	Rm
Provision of additional DBT Export berthing capacity - Berth 802 / 3	2 478	1 100	RCB	-	-
Reconstruction of Sheet-Pile Quay Walls at Maydon Wharf	1 594	1 353	DBN	138	450
Execution: DCT berth deepening 203 to 205	4 500	4 500	DBN	-	467
Replacement of 6 Durban Tugs	1 442	1 373	DBN	-	-
Acquisition of associated land sites linked to DIA Site acquisition	2 000	2 000	DBN	-	-
Execution: Pier 1 Phase 2 Infill (Salisbury Island)	3 300	3 300	DBN	-	20
Operationalise Port for Containers (Prelim & Execution)	3 836	840	NGQ	109.	520
Quays and services for Expansion up Coega River	6 880	4 050	NGQ	-	-
Expansion of Container Terminal : CPT	2 608	1 474	CPT	306	159
Port Infrastructure for Mossgas Quay Extension & Associated Dredging Works & Dry Dock Facilities	6 000	1 500	SLD	-	-
Other projects		25 377		1 822	3 709
Total (excl. borrowing cost)		**46 866**		**2 376**	**5 326**

Table 17: Brief Motivation for Key Port Projects

Description	Motivation
Provision of additional DBT Export berthing capacity - Berth 802/3 : RCB	Construction of 2 additional berths to increase the dry bulk export capacity by 5m tons p.a.
Reconstruction of sheet-pile quay walls at Maydon Wharf : DBN	Refurbish and deepen 7 steel sheet-pile quay walls to increase safe operations and extend life of quays.
Deepening of container berths 203 to 205 : DBN	Deepening of container berths and dredging of channel approaches and basin (to -16.5m CD) in the port to accommodate larger vessels calling and thereby improve productivity at these berths.
Replacement of 6 Durban tugs	Acquisition of 6 replacement tugs to cater for current and future demand for marine services. Tug replacement is aligned to Marine Fleet Management plan.
Acquisition of associated land sites linked to DIA Site acquisition	Acquisition of associated land sites linked to DIA Site required for future development of port at DIA. It is envisaged that the new port at DIA will add approx. 4.8m TEU capacity.
Execution: Pier 1 Phase 2 Infill (Salisbury Island)	This project involves the expansion of the existing Pier 1 container terminal by infilling between Pier 1 and Salisbury Island. A capacity increase from 0.72m TEU's to 2.1m TEU's is expected.
Operationalise Port for Containers : Ngqura	Construction of 2 additional container berths - additional 1.2m TEU's capacity. Total capacity of 4 berths container terminal 2.0m TEU's.
Quays and services for Expansion up Coega River	Future port expansion up Coega river to create capacity for future demand in bulk liquid (e.g. Refinery 25m kl litres).
Expansion of Container terminal : CPT	Upgrade and deepening of 4 container berths with increase in capacity from 0.7m TEU's to 1.0m TEU's and ultimately to 1.4m TEU's on completion of entire project.
Port Infrastructure for Mossgas Quay Extension & Associated Dredging Works & Dry Dock Facilities	This project involves the extension of the Mossgas quay, associated dredging and dry dock facility to cater for envisaged demand.

5.3 Port Consultative Committees (PCC's)

Following on from the ROD FY 2012/13 and discussions with the office of the Regulator the ports have been requested, at their respective PCC meetings, to share their capital programme for the next financial year, as well as their 5 year and 10 year Capital Expenditure Programmes (CAPEX). The table below shows the dates at which the CAPEX programmes for FY 2013/14, and the 5 and 7 years were presented at the respective PCC's.

Table 18: Port Consultative Committee Capex Presentation Dates

Port name	CAPEX presentation date FY 2013/14	5 and 7 year CAPEX programmes
Richards Bay	31st May 2012	16th August 2012
Durban	18th May 2012	17th August 2012
East London	25th May 2012	24th August 2012
Ngqura	24th May 2012	23rd August 2012
Port Elizabeth	23rd May 2012	22nd August 2012
Mossel Bay	9th May 2012	6th August 2012
Cape Town	11th May 2012	8th August 2012
Saldanha	10th May 2012	7th August 2012

At the PCC for the Port of Durban, which was held on the 18th of May 2012, concerns were raised on two capital projects namely: Re-engineering of DCT (Paving) and Crane Beams for Ship-to-Shore Cranes at DCT being executed and funded by the Authority although they are for the terminal operators benefit. Both these Capital projects, once completed will be transferred to Transnet Port Terminals (TPT).

6 Tariff Application Approach

The tariff application FY2013/14 has been prepared using the revenue requirement methodology. In terms of this methodology, the revenue requirement is determined as follows:

Revenue Requirement = **(Regulatory Asset Base ("RAB") X Weighted Average Cost of Capital) + Operating Costs + Depreciation + Taxation Expense – (+) Claw back + (-) Excessive Tariff Increase Margin Credit + Financing factor**

The cost of capital has been determined by calculating a Vanilla weighted average cost of capital ("WACC"). Following on the Record of Decision for FY2012/13, the Regulator has approved that the Trended Original Cost (TOC) be used for future RAB determination, with the FY 2010/11 tariff decision establishing the Starting Regulatory Asset Base (SRAB). The Authority proposes that TOC be used to roll forward RAB and not just the starting RAB.

The Authority's operating expenses are accounted for in accordance with International Financial Reporting Standards.

Depreciation was calculated based on the straight-line method beginning on the estimated date that assets will become available for use, in accordance with the principles contained in the International Accounting Standard ("IAS") 16 - Property Plant and Equipment.

A taxation computation was performed in order to arrive at the taxation expense, which is included in the revenue requirement calculation.

The Claw back is the mechanism used to rectify any over or under-recovery of required revenue relating to previous tariff determinations.

Excessive Tariff Increase Margin Credit (ETIMC) is included in the revenue requirement methodology by the Ports Regulator to offset against high future tariff increases (spikes) resulting from the capital expenditure programs (not applicable for this tariff application).

Financing factor caters for instances where the determined allowable revenue cannot meet the Authority's actual debt obligations of the Authority (not applicable for this tariff application).

7. Revenue Requirement Determination

7.1 Regulatory Asset Base (RAB)

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

Table 19: Regulatory Asset Base

Description	FY 13/14 Rm
Opening NBV March 2013[4]	62 097
Adjustment to Opening NBV for DIA	1850
Restated Opening DIA	63 947
TPT asset trf[5]	(985)
NBV trended 31 March 2013	66 362
add Capex FY 2013/14	5 326
add inflation for half a year FY 2013/15 Capex	144
less Depreciation FY 2013/14	(1 659)
Closing NBV at 31 March 2014	70 173
Average opening and closing RAB	66 568
Less: Working Capital	(253)
RAB final 2012/13	66 315

7.1.1 Asset base

The Regulator has confirmed in the Record of Decision (ROD) FY2012/13 that the FY 2010/11 tariff decision establishes the starting regulatory asset base. This starting asset base however did not include the Real Estate business of the Authority as this was introduced for the first time in the tariff determination for FY 2012/13. The Authority proposes for this tariff application FY 2013/14 that the starting regulatory asset base value for the Real Estate business is informed by that established in the ROD 12/13 even though assets rented to Transnet divisions were valued at historic cost. Market value valuations of assets rented out to Transnet divisions as in the case of Transnet Port Terminal (TPT) will be considered as part of the tariff methodology discussions.

The ROD for FY 2012/13 further approved that the Trended Original Cost (TOC) be used to roll forward the starting RAB. The Authority proposes that this TOC be used to roll forward RAB and not just the starting RAB.

The Regulatory Asset Base of the Authority has thus been trended per Regulator's decision using South African Reserve Bank (SARB) inflation indicator (**refer to Annexure A**).

[4] Trended as per Ports Regulator's decision (Refer to annexure A)

[5] An agreement has been reached with TPT that certain terminal assets occupied and used by them should be transferred; it is anticipated that this transfer shall occur within the FY 2012/13 financial year

The steps taken to calculate the RAB is illustrated below.

a) The RAB value used in the allowed revenue formula reflects the expected average RAB value over the tariff period (i.e. the average between closing and opening values) for the review period.

b) The RAB value for the review period, y, is calculated using the following formula:

Diagram 4: RAB

$$RAB_y = \frac{1}{2}\left(RAB_{C,y} + RAB_{O,y}\right)$$

Where:

- $RAB_{O,y} = RAB_{C,y-1} \times (1 + CPI_y)$
- $RAB_{C,y} = (RAB_{O,y} - WC_y) \times (1 + CPI_y) + CI_y + WC_y - D_y$

Where:

- CPI_y is the annual rate of general inflation expected over the review period;
- CI_y is the value of expected capital investment over the review period, expressed in closing year prices;
- WC_y is the required working capital over the review period, expressed in closing year prices;
- D_y is the depreciation allowance for assets within the RAB over the review period;
- $RAB_{O,y}$ is the opening Regulatory Asset Base over the review period in closing year prices; and
- $RAB_{C,y}$ is the closing Regulatory Asset Base over the review period in closing year prices.

7.1.2 Capital Work In Progress (CWIP) and Capital Expenditure (CAPEX)

CWIP refers to assets that are under construction. Such construction ties up scarce capital and Port facilities which typically take between 24 and 36 months to construct. In order to arrive at the complete required return on assets, a return on CWIP must be included in the Revenue Requirement, as the construction of these assets must be financed.

7.1.3 Trending the Asset Base

In the Revenue Requirement methodology (Real WACC x RAB), it is a requirement to inflate the Asset base as the Real WACC is being applied. SARB average inflation figure of 5.4% has been used in the RAB calculation.

7.1.4 Depreciation

The average depreciation used for accounting purposes per IAS 16 is applied to the regulatory asset base. The method used to determine depreciation for the Authority is based on the follows factors:

- Depreciation on a straight line basis;
- The service life of the asset which is reviewed annually being used;
- Regulatory Asset Base value informing the depreciation value.

In accordance with IAS 16, the following principles are applied:

- Depreciation commences when the asset is declared available for its intended use after the commissioning of the asset.
- The useful lives and residual values of assets are reviewed and adjusted annually, in accordance with IAS 16.
- An asset's carrying value is written down immediately to its recoverable value if the asset's carrying value is greater than its estimated recoverable value.
- Assets in the course of construction are not depreciated.

7.1.5 Working Capital

Net working capital comprises of inventory, receivables plus operating cash, less trade payables and forms part of the RAB. The detailed explanation of the components of Net working capital is discussed below:

- Inventory

Inventories on hand are required to maintain the port facilities, which are charged as tariffs. Average of the opening and closing balance has been used for this purpose.

- Average Operating Cash

Operating cash is that which remains in the Authority's institutional bank account (i.e. not swept into Current account held between Transnet Group and the Authority at year-end).

- Trade receivables

Revenue is assumed to be earned equally over the financial year and in terms of business practice is usually settled within 30/31 days from statement date. Therefore Trade Receivables has been based on the revenue requirement calculated in the tariff application inflated for 14% VAT divided by 12 months to account for the 1 month delay in receipt of cash.

Less: Current Liabilities:

- Trade Payables :

This is informed by Operating Costs (excluding Labour Costs) and Capital Expenditure incurred by the business. Labour is excluded as this is paid within the month of incurrence.

- Operating expenses (excluding Labour Costs) are usually settled within 30/31 days from invoice date and assuming they are incurred evenly throughout the year pertaining to the tariff application inflated by 14% VAT and divided by 12 to account for the 1-month delay in payment by the Authority.
    - Capital expenditure payables - in terms of the revenue requirement determination the Authority includes the Capital expenditure (CAPEX) for the coming year in the determination of the regulatory asset base. Hence, the financing effect of the terms extended by creditors relating to capital expenditure needs to be included in current liabilities. This CAPEX can be split into that expected to be paid within 30/31 days from incurrence and the balance to be settled within a period greater than a year (retention monies to address latent defects and disputes).
        - Payable within 30/31 days- 95% of the CAPEX spend in the Tariff Application should be used, inflated by 14% VAT and divided by 12 on the assumption that this is incurred evenly throughout the year.
        - Retentions to be included is calculated by taking into account the balance of 5% CAPEX spend as contained in the Tariff Application inflated by 14% VAT.

- VAT Liability

This represents the Input VAT element contained within Trade receivables offset by Input VAT arising from Trade payables, Capital expenditure payable and retentions determined from above. As this provided the Authority with some form of financing on a day to day basis the sum of these components, assumed accrued evenly, should be calculated on a 22 day financing basis informed by average earning in the month (15 days) + 7 days for payment by the 7th in terms of SARS requirement.

- Current Tax Liability

The tariff application makes provision for a current tax expense in terms of the revenue requirement. The financing element of the current tax liability should therefore be considered as part of the current liabilities. The current tax system requires provisional tax payments at 6-month intervals; the liability has been averaged over the period of the financing, which equates to an effective quarter of a year financing assuming the tax is accrued evenly throughout the financial year.

- Provision for Leave Pay

This represents leave pay accrued for the Authority's employees which has not yet been settled and therefore suggests a form of Financing. The average leave pay for the application period has been estimated at 2.5% on the labour costs for the period.

7.2 Weighted Average Cost of Capital (WACC)

A Vanilla WACC has been used in this tariff application (refer to **Annexure B** for a full explanation on the calculations of the WACC) with the key components contained in the table below:

Table 20: WACC

Description	FY 13/14 Rm
Risk-free rate (nominal)	8.36%
Risk-free rate (Real)	2.81
MRP	6.30%
Asset beta	0.8907
Equity beta (using Hamada)	1.2514
Gearing	0.36
Debt/equity ratio	56%
WACD (nominal)	9.76%
Inflation forecast	5.40%
Tax rate	28.00%
Cost of equity (nominal post-tax)	10.69%
WACD (real, pre-tax)	4.14%
WACD (real, post-tax)	1.54%
Real Vanilla WACC	8.33%

7.3 Operating Costs

7.3.1 Operating Expenditure

The Authority's operating expenses are accounted for in accordance with International Financial Reporting Standards. The Authority is a landlord port authority and therefore its operations are capital intensive. Consequently, most of the Authority's operating costs are of a fixed nature. This section provides an analysis of the Authority's material operating expenditure items as shown in Table 21 below:

Table 21: Operating Cost Excluding Group Overheads

Cost Category	Actual 2011/12 R Million	Budget 2012/13 R Million	Forecast 2013/14 R Million	Deviation R Million 2012/13 VS 2013/14	Deviation % 2012/13 VS 2013/14	% of Operating Cost 2013/14
Labour Costs	1 440	1 491	1 681	190	12.8%	50.4%
Rates & taxes	185	180	190	10	5.7%	5.7%
Maintenance	565	608	613	4	0.7%	18.4%
Contract Payments	72	59	63	3	5.3%	1.9%
Energy	274	374	476	102	27.2%	14.3%
Professional services	64	130	153	23	17.4%	4.6%
Material	67	78	81	3	4.0%	2.4%
Computer & Info systems	53	87	94	7	7.8%	2.8%
Rental	51	70	88	18	26.4%	2.7%
Security costs	59	59	63	4	6.8%	1.9%
Research & development	16	91	94	3	3.1%	2.8%
Sundry operating costs	(341)	(271)	(261)	10	-3.6%	-7.8%
Total operating cost (excluding depreciation)	2 505	2 956	3 333	377	12.7%	100.0%
Group Costs	269	520	620	99	19.1%	100.0%
Total operating cost (Including Group Costs)	2 774	3 477	3 953	476	13.7%	100.0%

Table 22: Authority's Sundry Operating Cost split

	Actual 2011/12 R Million	Budget 2012/13 R Million	Forecast 2013/14 R Million	Deviation R Million 2012/13 VS 2013/14	Deviation % 2012/13 VS 2013/14
Accommodation and refreshments	16	16	18	2	12.7%
Claims paid	8	-	-	-	-
Insurances	17	24	26	2	7.2%
Stationery, printing and related costs	6	12	12	1	7.1%
Miscellaneous operating expenses	150	173	186	13	7.7%
Transport expenses	23	28	32	3	12.3%
Environmental management	5	14	21	8	55.4%
NPA cost centre recoveries	(47)	(41)	(44)	(3)	7.0%
Intra NPA recoveries	(343)	(357)	(374)	(17)	4.7%
NPA cost centre charges	47	38	41	3	7.4%
Miscellaneous income	(62)	(22)	(9)	13	-58.1%
Ancillary costs	(162)	(156)	(171)	(15)	9.8%
Total sundry operating expenses	**(341)**	**(271)**	**(261)**	**10**	**-3.6%**

7.3.1.1 Labour Cost

Labour costs contribute 50.4% to the total operating costs for FY 2013/14. The number of permanent employees at the Authority is planned to increase from 3422 as at March 2012, to 4044 in March 2013 and then to 4159 in FY 2013/14. As a result, Labour costs are expected to grow by 12.8% in FY 2013/14. Included in labour costs FY2011/12 above is an amount of R162m for incentive bonuses which is not provided for in future years as this is included in the planned group overhead costs.

Additional skills are required to meet objectives of the MDS Strategy and to support delivery in key focus areas, these critical skills identified are as follows:

- Port engineering and Project management resources to be increased in line with the upgrading of existing infrastructure as well as new infrastructure requirements;

- Marine services as a result of the quad-shift system in order to improve efficiencies;
- Aviation services which are currently out-sourced;
- Risk management competencies (including environmental management);
- Contracts and vendor management;
- Operations and oversight management and
- Security services which are shifting toward in-sourcing.

7.3.1.2 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. Rates and taxes are increasing in line with inflation for the 2013/14 year.

7.3.1.3 Maintenance

Repairs and maintenance remains one of the Authority's key focus areas, as a result Maintenance will be increased slightly from FY 2012/13 to FY 2013/14 in order to ensure the efficient continuity of operations in line with required standards.

7.3.1.4 Contract Payments

Contract payments will be closely monitored and are expected to grow in line with CPI.

7.3.1.5 Energy

The main driver for increased energy cost is electricity and is linked to electricity tariff increases implemented by municipalities and Eskom. The trend of higher fuel and electricity costs are expected to continue into the immediate future as global markets experience higher oil prices and the local economy gears up for increased capital expenditure by Eskom, resulting in higher tariffs. Electricity costs also include a margin charged by municipalities which are the source of supply to the ports.

7.3.1.6 Professional Services

The majority of professional fees relate to internal and external audit fees (financial and operational/ environmental) and legal fees whilst the remainder relates to consulting fees and other professional services expected. 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. These services are expected to increase in FY 2012/13 and FY 2013/14 with the implementation of the roll out of the Section 56 processes including the Port of Ngqura container terminal and Port of Ngqura manganese terminal. As a result, the FY 2013/14 increase will be 17.7%.

7.3.1.7 Material

These costs are influenced by material price increases and exchange rate fluctuations on maintenance material used for the marine fleet and civil maintenance. Higher material costs are attributed to the Authority focusing on maintenance. In line with the FY 2012/13 maintenance drive, FY 2013/14 costs will increase in line with CPI.

7.3.1.8 Computer and Information Systems

Computer and information systems cost includes network costs, software licenses, information system support, development cost, computer consumables and on-going maintenance thereof. The increase from FY 2011/12 through to FY 2013/14 is mainly due to increased network and support cost influenced by the roll out of various IT projects across the port system.

7.3.1.9 Rental

The increase in rental for the 2013/14 year is attributable to increases in hire of internal and external land and buildings; machinery, equipment and furniture, non-revenue earning vehicles; and telecommunications equipment.

7.3.1.10 Security

The Authority is using private security firms in the ports. The cost increases relates to contract obligations and additional security arising from ISPS obligations, which require stringent compliance to international standards. As a result, security costs are expected to increase by 6.8% for FY 2013/14.

7.3.1.11 Research And Development

These costs relate to studies for future capital investments in a pre-feasibility phase to determine the merits or viability of a project and different options available. The feasibility phase is funded from the capital programme for final detailed design. Costs will vary from year to year depending on the future capital programme. The main driver for the increase in research and development costs during the FY2012/13 and FY2013/14 years is mainly attributable to the Pre-Feasibility study for Durban Pier 1 Phase 2 Infill (Salisbury Island), pre-feasibility studies for the development of the port at the Durban International Airport Site and the ICT Improvement Programme.

7.3.1.12 Sundry Operating Cost

Dredging charge-outs, which are usually set off against the recoveries in sundry operating costs have been grouped under maintenance costs. This causes Sundry operating costs to reflect a negative balance. The large increase from FY 2012/13 to 2013/14 is as a result of an increase in insurance costs, stationery and printing costs, transport, promotions and advertising, cleaning services, environmental costs and other miscellaneous operating expenditure as well as a reduction in internal recoveries and miscellaneous income.

- Accommodation and refreshments, Transport expenses and stationary costs are all increasing not only with inflationary pressure but also in line with additional staff needs.
- Environmental management costs have been stepped up in alignment with conservations efforts and long-term sustainability strategies across the port system.
- Miscellaneous costs increases are as a result of promotions and advertising, cleaning services, water, refuse removal, workmen's compensation, sponsorships and various other operating cost increases.
- Miscellaneous income shows a reduction in FY2013/14 as sundry income and recoveries are planned to diminish as a result of the standardisation of revenue recognition resulting in these incomes being accounted for in revenue.

7.3.2 Group Overhead Cost

Transnet Head Office (i.e. Group Services) incurs significant expenditure centrally to support the various operating divisions ("OD's"). In addition provision is made for certain divisional specific costs at head office. Furthermore losses/profits in respect of Transnet Capital Projects and social responsibility costs are required to be recovered from the OD's.

These costs that have been incurred/budgeted need to be recovered from the relevant OD's on a fair basis. In order to recover these costs, various cost-drivers are utilised to allocate these costs (e.g. revenue, capex plans, personnel numbers, estimated utilisation etc.)

An analysis of the Group cost expenditure items is shown in Table 23 on page 40:

Table 23: Group Overhead Costs

Cost Category	Actual 2011/12 R Million	Budget 2012/13 R Million	Forecast 2013/14 R Million	Deviation R Million FY12/13 vs. 13/14	Deviation % FY12/13 vs. 13/14	% of Operating Cost 2013/14
Labour costs	96	241	280	38	15.9%	45.1%
Professional Fees	39	131	145	14	10.7%	23.3%
Computer and info systems	25	8	10	2	20.3%	1.5%
Other Operating Costs	109	141	186	45	32.2%	30.0%
Grand Total	**269**	**520**	**620**	**99**	**19.1%**	**100.0%**

7.3.2.1 Labour Costs

The MDS strategy aims to increase Transnet's employee numbers to 74 000 by FY 2018/19. In line with this, it is anticipated that the labour costs will increase sharply with notable increases in areas such as the School of Security and personnel to support the MDS. In addition, in FY 2012/13 a once off labour cost relating to a significant IT project (Asset Stabilisation) is anticipated.

It is anticipated that there will be expenditure relating to post retirement benefit obligations going forward.

For the purposes of the FY 2011/12 actual results, all divisions in Transnet account for their portion of the short term incentive bonus provision within their personnel costs, for the Authority this amounts to R162m. During the budgeting process, however, all incentive bonuses are accounted for by Transnet Group. This has therefore resulted in an increase in the bonus allocation to the Authority in the forthcoming years.

7.3.2.2 Professional Fees

The implementation of the Market Demand Strategy will necessitate the use of various professionals and subject specialists across Transnet. This will therefore result in a significant increase in professional fees. The Authority's portion of this expense category amounts to R24m for FY2011/12. Included within the professional fees in FY 2012/13 that have been allocated to the Authority are Front End Loading ("FEL") studies of R84m and PSP consulting fees of R8m.

7.3.2.3 Other Operating Costs

One of the key objectives of MDS includes the delivering of lasting economic, social and environmental value to society. This will therefore warrant an increase in CSI spending. Also included in other operating costs is depreciation and TCP profit/losses.

7.3.3 The Authority's Total Costs

The Total cost analysis of the Authority's operating expenditure including Group cost is shown in Table 24 below:

Table 24: Authority's Operating Cost including Group Overheads

Cost Category	Actual 2011/12 R Million	Budget 2012/13 R Million	Forecast 2013/14 R Million	Deviation R Million 2012/13 VS 2013/14	Deviation % 2012/13 VS 2013/14	% of Operating Cost 2013/14
Total NPA cost	2 505	2 956	3 333	377	12.7%	84.3%
Group Costs	269	520	620	99	19.1%	15.7%
Total operating cost (Including Group Costs)	**2 774**	**3 477**	**3 953**	**476**	**13.7%**	**200.0%**

The Authority's total cost amounts to R3 953 million including Group overhead. The split of costs into different operations of the Authority's business such as marine costs and lighthouse costs has not been provided. This will be informed by the pricing strategy project.

7.4 Taxation

The cost of capital includes an allowance for tax so that the total revenue requirement is sufficient to leave a profit equal to the Authority's post-tax cost of capital.

The Authority has used a Vanilla WACC in the revenue requirement calculation and consequently has reflected taxation as an expense in its revenue requirement.

If a Vanilla WACC is used, a separate allowance has to be made for tax. The Authority is not the legal entity for which tax is calculated and paid. Furthermore, any attempt to estimate a pro rata share of actual tax paid by Transnet may be quite unrepresentative of the tax burden that would have be borne by the Authority had it been a separate corporation. Under these circumstances, a pragmatic solution is to make a notional tax allowance that is as close an approximation as is reasonably possible to the actual tax that the Authority would have paid.

In terms of the Income Tax Act, the Authority is obliged to pay tax on the earlier of receipt or accrual of revenue. The result of this is that the Authority has already paid the tax on the over-recovery of revenue which is used to determine the Authority's clawback. The net result being the Authority has already paid the tax but has not received it in terms of the previous decisions made by the regulator.

The tax payable has thus been calculated using the Revenue Requirement including clawback in order to put the Authority in the same position had the actual revenue received and required revenue been the same.

The calculation of the notional tax expense uses the following formula:

$$T_{\text{notional, corrected}} = t \times \begin{pmatrix} \text{AR} - k_{d,\text{nominal, pre-tax}} \times g \times RAB \\ -D_{\text{tax}} - E_{\text{tax}} \end{pmatrix}$$

Where:

- AR is the allowed revenue for review period
- D_{tax} is the value of depreciation of the business's assets for tax purposes.
- E_{tax} is the value of expenses for tax purposes

The table below shows the taxation expenditure calculation for the Authority:

Table 25: Taxation

Description	FY 13/14 Rm
Revenue Requirement	10 275
Addback: Clawback	1 402
Revenue Requirement including clawback	11 676
less Depreciation	(1 610)
less OPEX	(3 953)
less Cost of debt	(2 288)
Taxable Income	3 825
Statutory Tax rate	28%
Taxation expense	**1 071**

7.5 Revenue Claw back

Realised revenues in any given year could deviate from revenues allowed by the Regulator for that same year if outturns of volumes, expenses, etc. do not match the Regulator's forecasts. Such deviations would represent either over-recovery or under-recovery of required revenues. Either scenario would call for some form of ex post adjustment to the Authority's allowed revenues.

The key purpose of applying claw back is to ensure that the Authority does not gain or lose out from discrepancies between forecasts made at the time of the tariff application and actual figures on the outturn of capital expenditure, operating expenditure, depreciation, taxation and volume. With these considerations in mind, the value of any claw back for over-recovery or under-recovery of revenues for year y may be calculated as:

$$C_y = \Delta AR_{y-2} - IC(1+WACC_{y-1})(1+WACC_{y-2})$$ Where,

- C_y = the value of the claw back to correct for the effect of outturn revenues over a period of two tariff determinations.
- ΔAR_{y-2} = is the difference between actual revenues observed in year y-2 and the revenues that the Regulator ought to have set in that period, had it enjoyed perfect foresight over volumes, expenses, tax obligations and depreciation (i.e. the elements of allowed revenues for which it is possible to observe ex post values after the fact);
- *IC* = the Interim Claw back (50%) as determined by Ports Regulator
- $WACC_{y-1}$ and $WACC_{y-2}$ are the rates of profit allowed to the Authority over review periods *y-1* and *y-2*, respectively. Differences between forecasts and actuals for *y-2* are compounded forward two periods within the claw back to account for the approximate time value of money over these years.

The claw back relating to financial year FY2011/12 has been calculated with the benefit of hindsight to determine the true over-recovery of revenue using the proposed methodology. In order to calculate the applicable WACC for the FY2011/12 period a gearing of 34% was used, which was determined by calculating the gearing of the authority as at 31 March 2012.

The revenue requirement for FY2011/12 is calculated as follows:

Table 26: Revenue requirement calculation FY2011/12

Description	R m
RAB	47,379
Real post-tax WACC	4.98%
Return on Capital ("ROC")	2,364
Plus: Depreciation	937
Plus: Operating Expenses	2,604
Plus: Taxation Expense	816
Total recalculated revenue requirement 2011/12	**6,721**

The claw back calculation for the Authority is illustrated in table below:

Table 27A: Claw back calculation 2011/12

Description	**Based on 2011/12 Actuals (Using Regulator WACC) Rm**
Total recalculated revenue requirement 2011/12	6,721
Actual revenue 2011/12	7,985
Post-Tax WACC $_{2011}$	10.91%
Post-Tax WACC $_{2012}$	12.18%
Clawback	1,573
Less: 2011/12 Clawback taken in 2012/13	540
Less: ETIMC	900
Net Clawback for 2011/12	133
Plus: Remainder of 2010/11 clawback	564
Total Clawback	**697**

Table 27B: Claw back calculation 2012/13

Description	Based on 2011/12 Actuals (Using Regulator WACC) Rm
Latest Estimate Revenue	9 238
Port regulator Revenue Requirement	7 793
Clawback 2012/13	1 445
Adjustment to Clawback for changes in RAB & WACC	(36)
Total 2012/13 Estimated clawback	1 409
50% of Clawback	705
Total Clawback for 2012/13 application	1 402

7.6 Excessive Tariff Increase Margin Credit

Since access to capital is essential to investment and the effective provision of port services, the Ports Regulator considers it prudent to retain an Excessive Tariff Increase Margin Credit (ETIMC) inside of the Authority to offset against future large, justified tariff increases resulting from the capital expenditure programmes.

The Regulator introduced ETIMC in the ROD FY 2012/13 with an opening balance of R900m with the understanding that any unused portion hereof would earn a return aligned to the WACC determined. In order to manage this more effectively and allow for the more efficient smoothing of tariff adjustments one would need to have a sense of the future tariff trajectory.

The Authority therefore proposes to retain the ETIMC in anticipation of future tariff spikes given the CAPEX program of R46. 9bn over the market demand strategy period

7.7 Revenue Requirement

Table 28: Revenue Requirement

Description	FY 13/14 Rm
RAB	66 315
Real Vanilla WACC	8.33%
Return on Capital	5 525
Plus: Depreciation	1 659
Plus: Operating Expense	3 953
Plus: Taxation Expense	1 242
Less: Clawback	(1 402)
Plus: ETIMC	-
Revenue Requirement	10 978
Comprising of:	
Real Estate	1 856
Marine business	9 122

Application of the Revenue Requirement formula results in a revenue requirement of R10 978m (Table 28) comprising of Real Estate business revenue of R1 856m and Marine business revenue of R9 122m. In order to determine Marine Business revenue to be derived from tariff adjustments, the required revenue of R9 122m is compared with the expected revenue for FY 2012/13 increased for the expected growth in volumes for FY 2013/14. This translates to 14.2% per the calculation in table 29 on page 46:

Table 29: Revenue Requirement of 14.2%

Description	Rm
Tariff book revenue 12/13	8 490
Less Cargo Dues export program discount	-1000
Estimated revenue 12/13	7 490
Volume growth 13/14 at 12/13 tariff book rates	498
Forecasted revenue before tariff adjustment	7 988
Marine business	9 122
Tariff Adjustment	14.2%

The roll-out of the Authority's CAPEX programme in terms of the market demand strategy will result in spikes and troughs for future tariff adjustments when applying the Revenue Requirement formula. The Authority's projection of future tariff adjustments (beyond FY 2013/14) using similar parameters for FY 2013/14 will range between 5% and 16% per annum. A multi-year tariff application approach could assist with introducing a more smooth tariff trajectory over the same period which equates to 9.68% per annum for each of the FY's 2014/15 – FY 2018/19.

However current regulation does not accommodate for a multi-year tariff application approach. This will need to be considered as part of the tariff methodology agreement process between the Authority and the Regulator.

Revenue requirement determination on the multi-year basis (9.68%) results in a tariff adjustment of approximately CPI+4%. Whilst the Authority understands its role in facilitating economic growth by providing infrastructure as part of the market demand strategy it is also mindful of Transnet's commitment to reducing the cost of doing business in South Africa. The Authority has undertaken various financial assessments together with Transnet in anticipation that a multi-year tariff application approach will be adopted by the next tariff application FY 2014/15. Despite its aggressive CAPEX program the organisation could sustain a CPI + 3% tariff adjustment over the remaining years of the Transnet MDS equating to 8.5% increase per annum. (The Authority's CAPEX program does not include the cost of construction of the envisaged port to be located at the old Durban International Airport site).

Due to the non-finalisation of the tariff methodology and with the assumption that a multi-year tariff application of CPI + 3% will be considered next year the Authority proposes to cap the Revenue Requirement for FY 2013/14 to R10 275m as follows:

Table 30: Capped Revenue Requirement

Description	**FY 13/14 Rm**
Capped Revenue Requirement	10 275
Comprising of:	
Real Estate	1 856
Marine business	8 419

This translates to a 5.4% tariff adjustment as follows:

Table 31: Capped Revenue Requirement of 5.4%

Description	Rm
Tariff book revenue 12/13	8 490
Less Cargo Dues export program discount	(1 000)
Estimated revenue 12/13	7 490
Volumes growth 13/14 at 12/13 tariff book rates	498
Forecasted revenue after volume growth	7 988
Marine business	8 419
Tariff adjustment	5.4%

8 Authority's Total Revenue

8.1 Real Estate Revenue

The Authority has positioned itself as a landlord ports 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 its limited land to achieve the highest and best uses that can be accommodated within the port limits.

Third party tenants enter into long-term leases to enable them to invest on available land, by developing facilities for their operations which are negotiated on a case-by-case basis and are not reflected in the tariff book.

A diverse mix of terminal, handling and warehousing facilities have been developed at ports, inter alia: container terminals; automotive terminals in Durban, East London and Port Elizabeth; multi-purpose terminals for a variety of commodities; liquid bulk storage and tank farms for storage of products ranging from petrochemicals, oils, chemicals, etc. Dry bulk facilities for coal; iron ore, steel, manganese, etc., cold storage facilities for Fruit, fish and other perishables. Some ports have other significant installations like the petroleum refinery in the port of Durban; the coal terminal in Richards Bay and Pier 2 in Durban. The infrastructure invested in such facilities by tenant's amounts to billions of rand, on massive footprints. The Authority complements these developments by continually investing in port infrastructure to support and anticipate increasing demand by the market.

The salient details of the Authority's real estate portfolio are summarized in the table below to give a concise (consolidated) overview of the portfolio

Table 32: Real Estate salient features

Salient Features of Real Estate business	
No of Ports	8
Net Book value of Real Estate assets as at 31 March 2012	R8 899m
Gross Lettable Area	Approx.' 27 million m2
No of Tenants	750
Total No. of Terminal Operators	89
Vacancy Factor	30%
Average Term of Leases	3 – 25 years
Total revenue (as at March 2012)	R1 629m
Split ratio based on value (March 2012)	
External	49%
Internal	51%
Estimated Revenue FY 12/13	R1 732m
Estimated Revenue FY 13/14	R1 856m
Revenue growth	R124m

Revenue growth from FY 2012/13 to FY 2013/14 is R124m (7.2%). Real estate business by nature of it being agreement/contract driven is not a subject of any tariff increase requested for in this application.

8.2 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 in five market segments namely, containers, dry bulk, liquid bulk, break-bulk and automotive. The main source of revenue is the tariffs which are charged by the Authority for providing the aforementioned services after approval by the Regulator. The tariffs charged are influenced by the expected volume growth which is further influenced by demand and economic outlook.

The Authority also generates revenue through contracted tariffs and Real Estate rental arrangements including escalations which are negotiated on a case-by-case basis and are not reflected in the tariff book.

8.3 The Authority's Volume

The main volume drivers for the Authority are cargo and marine services.

8.3.1 Cargo

The growth in cargo volume through the port system will be driven largely by local and global demand and supply, modernisation of logistics infrastructure, capacity expansion and supply chain efficiencies which include port efficiencies. 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 Africa.
- 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), but which is handled at a South African port. This cargo could be termed “cargo in transit”.

8.3.2 Marine Services

Marine volumes comprise the number of ships arriving at South African ports and their associated Gross Tonnage (“GT”). The size of the vessel and the number of days spent in the port dictates how much the vessel will be charged for utilizing basic port infrastructure and marine services operational charges, i.e. tugs, berthing and pilot assistance.

The forecasted volumes are derived from various sources and translated into the Authority’s future revenue expectation. The volumes are subjected to intense evaluation during the budget cycle, periodically reviewed and updated when necessary. The Authority gathers cargo volume and vessel forecasts primarily from terminal operators and shipping lines. The combined impact of the current volatile global environment and internal structural changes are likely to influence volume forecast patterns going forward and therefore will be reviewed over the projected period. The volume growth is illustrated in the table 33 on page 50:

Table 33: Authority's Volume Growth

	Actual 2011/12	Budget 2012/13	% Dev	Forecast 2013/14	% Dev
Containers (TEUs)					
Deepsea Full : Imports	1 372 088	1 440 086	5.0%	1 544 176	7.2%
Deepsea Full : Exports	961 495	1 048 630	9.1%	1 123 157	7.1%
Transhipments	1 073 014	1 319 157	22.9%	1 508 584	14.4%
Other	945 681	1 013 513	7.2%	1 074 172	6.0%
Total	**4 352 278**	**4 821 386**	**10.8%**	**5 250 088**	**8.9%**
Vehicles (Units)					
Vehicles : Imports	403 729	357 328	-11.5%	371 962	4.1%
Vehicles : Exports	251 161	228 290	-9.1%	212 452	-6.9%
Other	19 887	24 000	20.7%	24 720	3.0%
Total	**674 777**	**609 618**	**-9.7%**	**609 134**	**-0.1%**
Breakbulk (Metric Tons)					
Breakbulk : Imports	1 668 621	1 279 961	-23.3%	1 294 089	1.1%
Breakbulk : Exports	6 694 761	10 176 890	52.0%	10 732 899	5.5%
Breakbulk : Other	195 916	79 882	-59.2%	78 851	-1.3%
Total	**8 559 299**	**11 536 733**	**34.8%**	**12 105 839**	**4.9%**
Dry Bulk (Metric Tons)					
Coal Exports	70 777 361	75 226 000	6.3%	79 230 520	5.3%
Iron Ore Exports	52 393 542	58 200 000	11.1%	61 000 000	4.8%
Manganese Ore Exports	6 933 425	7 500 000	8.2%	7 600 000	1.3%
Other Dry Bulk	21 069 284	21 052 122	-0.1%	24 468 052	16.2%
Total	**151 173 612**	**161 978 122**	**7.1%**	**172 298 572**	**6.4%**
Liquid Bulk (Kl)					
Petroleum	32 104 087	32 499 170	1.2%	38 926 965	19.8%
Chemicals	1 965 333	1 895 797	-3.5%	1 968 365	3.8%
Other Liquid Bulk	8 577 273	5 826 383	-32.1%	5 746 412	-1.4%
Total	**42 646 693**	**40 221 350**	**-5.7%**	**46 641 742**	**16.0%**

8.3.3 Segment Overview

8.3.3.1 Containers

- The volume projection for SA ports is estimated at 5 250 089 TEUs per annum by end of FY2013/14 Financial Year. The economic relationship between GDP and trade volume including Exchange Rate Fluctuations, Pricing and Fuel Prices will impact volumes on the container sector.

- There are other wide range of factors that will impact on the volume of container imports and exports, including Increased Port Infrastructural Capacity, Increased Liner Capacity and New Business. New Business Development should contribute to the growth of transhipment volumes at the Port of Ngqura.

- The projected rise in consumer spending will support growth mainly in container imports. Further, South Africa's expanding population will also support demand growth for containerised goods. It is not only consumer demand that is driving containerised imports into South Africa, the country has a booming automobile production sector. The import of components for this and related industries will also drive container imports forward.

- On the export side, South Africa has a significant fruit and agricultural industry, and much of this produce is exported to Europe. Fruit exports to Asia from South Africa are also growing. Although the export of coal and iron ore is primarily via a dry bulk activity, there is a global trend for more traditional dry bulk commodities beginning to be transported in containers, taking advantage of the intermodal links offered by containers.

8.3.3.2 Automotive

With the South African Automotive industry having contributed 6.8% to the GDP of South Africa in 2011; it is the largest industry in the local manufacturing sector. In terms of global production, South Africa contributes less than 1% which is evident in the projections over the respective period. It is noticeable that growth is conservative, mainly due to South Africa being largely dependent on the state of global markets such as Europe and United States, who are facing debt crisis. However, with the implementation of the Automotive Production Development Program, local manufacturers will have to increase production in order to qualify which may result in increased export volumes.

8.3.3.3 Coal

In years to come China and India’s increase in coal imports will account for more than a third of the predicted increases in global energy demand hence the projected volumes will cater largely for these countries. Major mines are working on expansion on their mining projects to be able to meet the demand.

8.3.3.4 Iron Ore

South African Iron Ore contributes 4% to the global iron ore market. In order to retain and grow the industry, Transnet embarked on an iron ore expansion project to increase capacity on the supply chain to meet customer demand. In support of this, volume projections over the respective period are aligned to the contractual arrangements of both customers with Transnet. Until completion of Phase 2A, export capacity through the Bulk Terminal in Saldanha will be 58 million tons per annum ("mtpa"), where after capacity will increase as per the projections. Terminal efficiencies through dual and staggered loading operations will increase throughput in order to meet the committed export volumes.

8.3.3.5 Manganese Ore

With South Africa being the global leader in terms of manganese ore reserves, it is evident in the projections that with the anticipated growth in exports, the current global position will be strengthening with higher export volumes. Currently, the local industry is expanding with new role players being allocated capacity within the rail and port sectors. The majority of volumes are being shipped through Port Elizabeth which is faced with constraints in terms of rail and port capacity. All role players are making concerted efforts to achieve a throughput of about 5 mtpa through the Ports of Port Elizabeth with surplus being exported via the Ports of Durban.

8.4 Pricing Strategy Overview

The Authority has previously acknowledged concerns with the current tariffing regime and embarked on developing a pricing strategy that is principle based and regulatory compliant whilst integrating common practices. Through the development of this strategy the following key issues related to the current tariff structure have been confirmed:

- Lack of a clear set of principles and rules to be applied in determining the individual tariffs for the various services and facilities;
- Lack of clarity and transparency regarding all operating costs, expenses and revenues incurred or generated from a specific service or facility, as well as the value of the capital related to such services or facilities;
- Lack of explanation for differential tariffs for different commodities using the same handling classification;
- Lack of information and detail with respect to services' or facilities' pricing and cost relationships, making it impossible to determine where and in which direction subsidisation takes place or if it does not;
- Lack of information on how the tariff structure promotes access to ports and efficient and effective management and operation of ports.

Furthermore, the Real Estate business of the Authority has until recently been excluded from the tariff structure, which therefore led to the tariff structure not encompassing the entire business of

the Authority. As a result of this, the current tariff structure presents several imbalances in the determination of the various tariffs, including:

- High tariff levels for cargo dues resulting from the migration from the old wharfage charge, which was calculated on an ad-valorem basis (depending on the value of the cargo);
- High differentials in the levels of cargo dues for different cargo types and commodities with no clear motivation for the differences;
- Low tariff levels for maritime services, which are based on an activity-based costing exercise conducted during the tariff reform of 2002 that has since not been updated, resulting in the subsidisation of some services;
- Lower levels of revenue from the Real Estate business as compared to other landlord port authorities across the world.

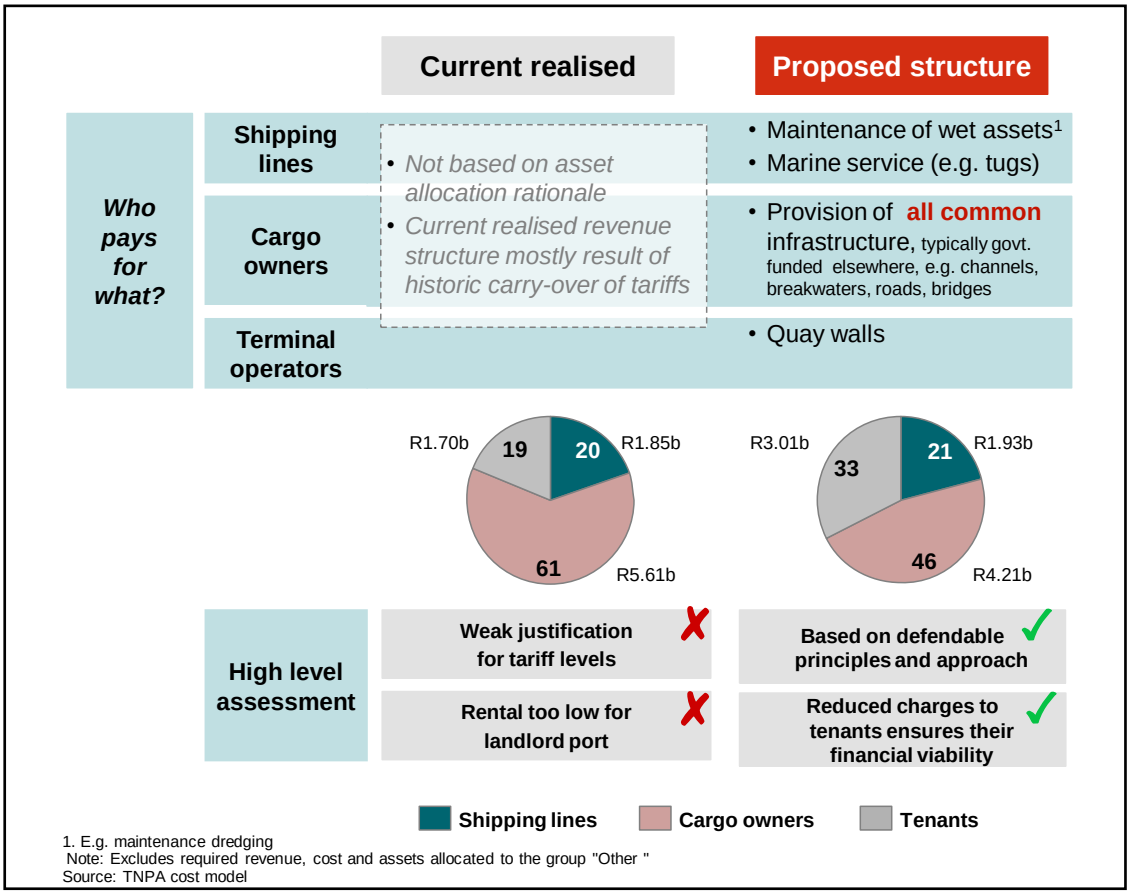
The new proposed tariff structure, premised on the Revenue Requirement methodology, aims at addressing these imbalances by providing a set of clear principles and rules, to determine the optimal levels for the various tariffs. Moreover, the new structure also represents a step forward towards the promotion of efficient and effective management and operation of ports thereby supporting the country's economic growth objectives.

Under the current tariff structure, cargo owners are bearing the burden of port charges (61%) through cargo dues, while shipping lines and terminal operators share the remaining 39%. The current split of the Required Revenue by port user group cannot be soundly defended, as it is not based on a clear allocation of assets. Other issues with the current split include:

- Very high tariff levels for cargo dues resulting from the migration from the old wharfage charge, which was calculated on an ad-valorem basis depending on the value of the cargo;
- Very high differentials in the levels of cargo dues for different cargo types and commodities with no clear motivation for the differences;
- Relatively low tariff levels for maritime services, which are based on an activity-based costing exercise conducted during the tariff reform of 2002 and that has since not been updated, resulting in the subsidisation of some services;
- Very low levels of revenue from the real estate business as compared to other landlord port authorities across the world.

The proposed Required Revenue, which is driven by asset allocation principles results in the following contributions to Required Revenue: terminal operators 33%, cargo owners 46% and shipping lines 21%.

Diagram 5: Proposed structure of required revenue



The proposed tariff structure means that terminal operators will pay higher rentals that are more in line with international norms; cargo owners will pay lower cargo dues, also more in line with international norms; and shipping lines will pay slightly higher tariffs. Based on the application of the design principles, the proposed tariff structure presents the most balanced and defendable distribution of Required Revenue across port user group. The success of achieving the higher real estate revenue is critical for the successful implementation of the pricing methodology.

The proposed cargo dues tariff structure will be based on the following principles and rules:

1. There must be a clear rationale to justify overall cargo dues. In the proposed tariff structure, cargo dues pay for the provision of common wet and dry infrastructure and must recover the required revenues from this infrastructure.

2. There should be one base rate per each different cargo handling type (i.e. containers, dry bulk, break bulk, liquid bulk, RoRo), which should be determined based on the user pays principle. Users of the common infrastructure are vessels; therefore usage by different vessel types for each cargo handling type seems the most appropriate way to determine the charges for each cargo handling type. Therefore, the proposal is to determine the share of total cargo dues to be paid by each cargo handling type through the count of vessel arrivals. For example, 44% of all relevant port calls are made by container vessels. Accordingly, 44% of the total cargo dues should be recovered by containers.

The exact tariff per unit will be calculated as: projected number of vessel port calls in percent of total vessel port calls × required revenue for common wet infrastructure ÷ projected volume of that cargo type.

3. Deviations from the base rate for cargo dues are proposed in line with government priorities with regards to the existing economic agenda of promoting exports and beneficiation.

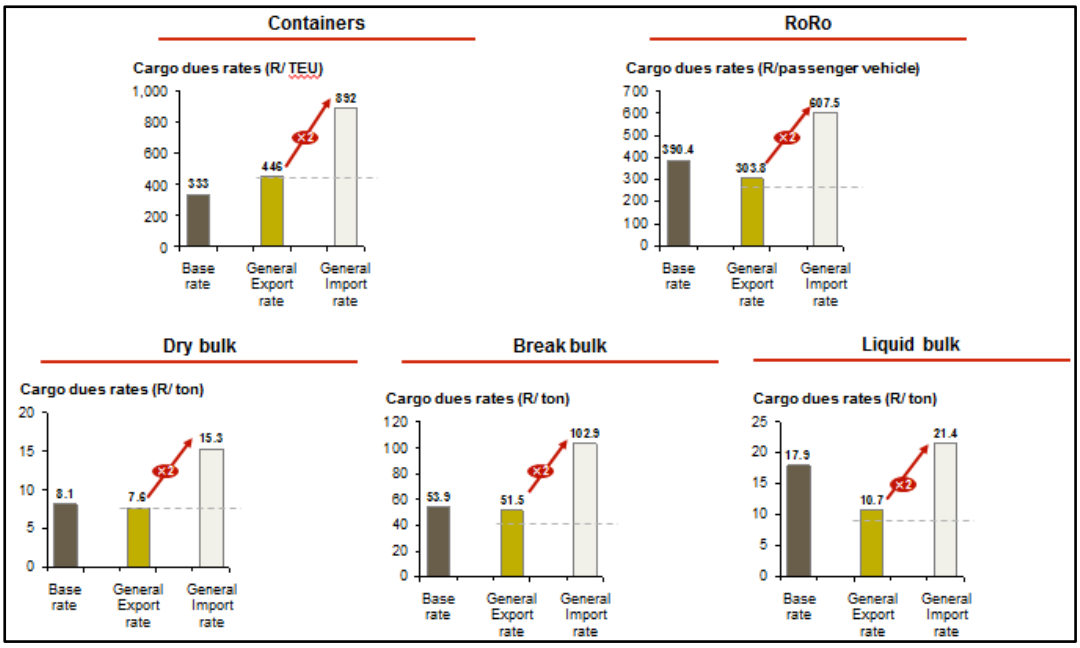
4. Any loss of revenue due to reductions from the base rate for specific cargo should be compensated by resetting the cargo dues rates for other cargos in the same cargo handling type. For example, a reduced base rate for break bulk exports will be compensated by higher rates for break-bulk imports.

Diagram 6: Cargo Dues calculation based on FY2012/13

	Containers	RoRo	Dry Bulk	Liquid bulk	Break bulk
RR as per vessel ratio	R 1 608m	R 238m	R 1 311m	R 352m	R 622m
Volumes	4.8m Teu's	609 618 units	162 tons	21 tons	12 tons
Base Rate	R 333 Teu's	R390 per unit	R 8.09 per ton	R 18 per ton	R 54 per ton

The resulting proposed rates for each cargo handling type are presented on diagram 7 on the following page

Diagram 7: Proposed rates for each cargo handling type (fully implemented Pricing Strategy)



8.5 Tariffing

The outcome of the Authority's pricing strategy clearly indicates that import and export container and automotive cargo dues tariffs need to reduce whilst those of other commodities particularly bulk commodities such as coal and iron need to increase. This is aligned with the Regulator who has recently been quoted citing iron ore and coal tariffs as being "far cheaper than the rest of the world". It is the Authority's intention to address these imbalances and in particular to correct the current tariffing regime (established through ad-valorem wharfage and later converted to unitised charges) where the manufacturing sector is disadvantaged with higher tariffs in favour of low cost mining exports.

Without detracting from the need for the Authority to engage with clients on the pricing strategy, the Authority is of the view that it is common knowledge that cargo dues levels of certain Dry Bulk and Break Bulk commodities are far too low and that the correction hereof is to commence in FY 2013/14. The Authority thus proposes a minimum export cargo dues tariff level of R6.00 for any Dry Bulk or Break Bulk commodity for FY 2013/14. Based on preliminary modelling of the pricing strategy, this R6.00 represents a phase-in tariff as the final tariff/s would certainly be higher evidence by the pricing strategy overview discussed above.

Application of this proposal results in the following tariff amendments on page 57:

Table 34: Designated cargo tariff adjustment:

Description	Tariff book tariff 12/13	Tariff book tariff 13/14	Dev. R tariff 13/14 vs 12/13	Dev. % tariff 13/14 vs 12/13
Break bulk Export:				
Cement & Clinker R	4.41	6.00	1.59	36.1%
Coal R	2.94	6.00	3.06	104.1%
Dry bulk Export:				
Coal R	2.94	6.00	3.06	104.1%
Cement & Clinker R	4.41	6.00	1.59	36.1%
Ores & minerals magnetite R	2.94	6.00	3.06	104.1%
Chrome ore R	5.30	6.00	0.70	13.2%
Sulphur R	5.60	6.00	0.40	7.1%
All other Dry bulk commodities	**Tariff book**	**6.00**	**n/a**	**n/a**

In addition, tariffs for containers and automotives are too high prompting the R 1 bn export discount program for FY 2012/13. It is therefore proposed to reduce the FY 2013/14 tariff book tariffs for full containers and export automotive partly enabled by increasing the minimum tariffs for Break Bulk and Dry Bulk cargo.

Table 35: Container & Automotive export

	Tariff book tariff12/13	FY 12/13 export cargo dues discount programme	Tariff book tariff12/13 after discount	13/14	Dev. R tariff 13/14 vs 12/13	Dev. % tariff 13/14 vs 12/13
Container Full export:						
6m/20' containers R	1 082	740	342	614	-467.37	-43.2%
12m/40', 13m/45' containers R	2 163	1 820	343	1 228	-934.76	-43.2%
Container Full import:						
6m/20' containers R	2 178	-	2 178	1 866	-312.07	-14.3%
12m/40', 13m/45' containers R	4 355	-	4 355	3 731	-624.10	-14.3%
Automotive export:						
Motor vehicle own wheels average tariff	**430.00**	**200.00**	**230.00**	**315.12**	**-114.88**	**-26.7%**

Balance of the tariffs contained in the tariff book FY 2012/13 is to be increased by 5.4% (inflation linked). Application of the above tariffs on projected volumes FY 2013/14 should result in the

Authority achieving the required Marine Business revenue of R 8 419m. The table below shows the marine business revenue:

Table 36: Marine business revenue

Description	Rm
Revenue Requirement	10 275
Comprising of:	
Real Estate	1 856
Marine business	8 419

8.6 Introduction of new levy

Bunker fuel levy

In order to deliver the current industry bunker fuel demands of 2 million tons per annum, at the Port of Durban, via barge only, the following is required:

- An increase in the number of barges to handle additional volumes previously delivered via pipeline.
- Provision of supporting infrastructure such as wharf and berthing facilities which will service the elevated demand for barge loading.

Island View Berth 10 is planned to be extended in order to accommodate the berthing of two barges with independent simultaneous loading. An amount of R57.5 million for the execution stage of the project has been approved. This initiative is supported by industry and a R15.00 tariff per ton has been agreed in principle with them. The Authority proposes to introduce this tariff of R15.00 per ton in FY 2013/14.

8.7 Amendment to empty transshipment container tariff

An inherent part of container flows within the port system is the transshipment of empty containers. Tariffing hereof is dealt with in accordance with Section 7.7 of the Authority's approved tariff book dealing with Transshipped Cargo. On closer examination however of the description of fees to be raised it is quite clear that the transshipment of empty containers is not addressed.

The practice up to now has been to consider empty containers as containerized cargo once established via the manifest that the transaction would be a transshipment activity. It goes without saying that an empty container cannot be defined as containerized "cargo" giving rise to an anomaly in the system.

The proposed amendment would be for the definition of fees for Transhipped Cargo to read as follows:

- Cargo/ Empty containers manifested to the port of discharge for transshipment to another port; or
- Cargo/ Empty containers for which transshipping orders have been accepted prior to, or within 3 days of the discharging vessel having commenced discharge; or

- Cargo/ Empty containers transhipped from one vessel to another without touching a wharf or jetty; or
- Cargo/ Empty containers landed in error or over carried and reshipped onto a different vessel; or
- Bunker fuel oil supplied to vessels direct from tankers (excluding bunker barges)

In relation to the definition amendments the following tariff would apply:

Empty containers, all sizes…….R 76.00

The Authority is unable to derive statistics of the how many empty transshipment containers are handled annually as our records, by virtue of the very anomaly, does not differentiate between empty and full transshipment containers. The proposed tariff is informed by the current cargo dues tariff applicable to import/ export empty containers per Section 7.4 of the Authority's tariff book and is considered most equitable for now.

9. Port Efficiency

In accordance with the Act, the Authority has to ensure efficient port services and this has been incorporated into the strategy of the business as illustrated in the diagram below.

Diagram 8: Operations Strategy for Port efficiency

The following are the key areas of focus for the Authority:

9.1 Maritime Operations Management

The Authority is committed to ensuring a seamless service is provided to vessels entering or exiting 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.

9.1.1 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.

9.1.2 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 will include manning levels).

In order to reduce the abovementioned type of delay, 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.
- On-going focus on the Tug Maintenance regime to ensure maximum availability.
- Due to the significant skills scarcity of Chief Marine Engineers to man the tugs, the Authority had to substantially invest in programmes to ensure future availability of this skills base through:
    - The establishment of a structured Chief Marine Engineering Officer ("CMEO") training programme which will ensure standardized assessment criteria and training across all ports;
    - Finalisation of a fixed term training contract to ensure the CMEO qualification is obtained within a prescribed period; and
    - Continuous engagement with the South African Maritime Safety Authority to address changes to the CMEO training requirements.

9.1.3 Berthing Services

Berthing delays are caused due to the berthing gangs not being at the allocated berth or not being available at the required service time.

In order to reduce the abovementioned type of delays, a quad shift system at the ports of Cape Town, Durban, Saldanha and Richards Bay have been implemented which will ensure that the berthing services shift patterns are aligned with the pilotage and tug operations.

An operational improvement initiative is currently underway, which is reviewing all marine operational processes, which includes marine operational planning, resourcing, technology infrastructure, as well as its functional structure. It is expected that this project will also further

ensure that the current number of shipping delays are even further reduced, thereby further enhancing the overall efficiency of the ports system.

9.2 Terminal Operations Oversight

The Terminal Operator Licence is a key instrument to level the playing field and introduce the same Authority's regulatory/oversight framework for similar existing types of cargo handling terminals.

The Terminal Operating Licence establishes the conditions that the Authority prescribes for terminal operators within its port premises. 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.

Section 65 of the National Ports Act provides for a special regime (transitional mechanism) for existing terminal operators. Following the Ministerial Notice (25 November 2011) and the Authority's Government Gazette invitation (02 December 2011), existing Terminal Operators were invited to submit applications to the Authority for a deemed licence conversion/s. The deadline for these applications was 31 May 2012 on a per terminal per port basis. All deemed existing Terminal Operators through engagement with the various ports have submitted their licence applications.

The Authority's process for the adjudication of the Terminal Operator Licence applications received was completed on 17th July 2012. Eighty nine (89) Terminal Operator Licences were issued in terms of section 57 read with section 65 of the National Ports Act. In the process the Authority issued in the port of Durban fifty four (54), Richards Bay six (6), East London seven (7), Port Elizabeth nine (9), Cape Town ten (10) and Saldanha Bay three (3) Terminal Operator licences.

Following the issuing of the Terminal Operator Licences, amongst others, the terminal performance measures need to be finalised for relevant terminal operators. Ngqura Container Terminal Licence is dealt outside the deemed licence process as part of the section 79 directive process.

To ensure the conditions in the Licence agreements are conformed to by the Licensees, the Authority has established an internal oversight function that will monitor and ensure compliance to the requirements of the operating Licence. This function will therefore significantly contribute to the overall operational efficiency of the port system as the terminal oversight responsibility will be executed in a proper and regulated manner.

10. Conclusion

The South African ports occupy a central position in the transport and logistics chain and with 98% of cargo volumes passing through them annually, ports are inherently required to play a leading role in influencing economic growth through a responsive market demand strategy. Accordingly the Authority is committed to its core strategy which is aligned to the Transnet MDS and shareholder expectations. The key pillars of the Authority's core strategy which are aimed at reducing the cost of doing business and driving growth in the economy are as follows:

- Create adequate port infrastructure capacity ahead of demand to enable volume growth;
- Improve port efficiencies;
- Assume a collaborative role with a view to enhance port integration and influence market growth.

In terms of the Port 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) make a profit commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities.

The tariff application FY 2013/14 has been prepared using the revenue requirement methodology. Application of this methodology results in a revenue requirement of R10 978m for the FY 2013/14. Given the non-finalisation of an agreed tariff methodology and related parameters the Authority's tariff application for FY 2013/14 is summarised as follows:

a) a capped revenue requirement of R10 275m for FY 2013/14 comprising Marine Business revenue of R8 419m and Real Estate revenue of R1 856m
b) capping of the revenue requirement to R10 275 being premised on the Authority submitting a multi-year tariff application next year with a smoothed tariff adjustment approximating CPI + 3% per annum with a floor of 8.5%
c) Tariffs:
    - Minimum export tariffs of 6.00 per ton for Dry Bulk and Bulk commodities
    - Reduction in certain container and automotive tariffs
    - 5.4% tariff adjustment of FY 2012/13 tariff book for all other quoted tariffs
    - Introduction of a bunker fuel levy of R15.00 per ton at the Port of Durban

Ends

ANNEXURE A

REGULATORY ASSET BASE (RAB) RECALCULATION

TRANSNET NATIONAL PORTS AUTHORITY

FY 2013/14

Regulatory Asset Base (RAB)	Adjusted for SARB 2010/11 inflation	
Description	**2012/13 Rm**	**Comments**
NBV at March 2010/11	46 650	
NBV inflated to 31 March 2011	555	Average SARB inflation of 3.83% used
Closing NBV at 31 March 2011	47 205	
Less: Capex underspend 2010/11	(236)	Underspend CAPEX as per 2011/12 ROD
Adjusted opening balance	46 969	
NBV inflated to 31 March 2012	49 726	Inflation of 5.87% per 2011/12 ROD
less Depreciation FY 2011/12	(937)	Depreciation of R937 approved per 2011/12 ROD
add Capex FY 2011/12	2 929	Approved Capex as per 2011/12 ROD
closing NBV at 31 March 2012	51 718	
Less: Capex underspend 2011/12	(1 149)	Underspend Capex as per 2012/13 ROD
Adjusted opening balance	50 569	
Opening NBV inflated to 31 March 2013	53 300	Inflation 5.4% as per 2012/13 ROD
TPT asset trf	(2 035)	

TPT asset trf inflated	(2 145)	Inflation 5.4% as per 2012/13 ROD
Real estate inclusion	8 443	
Real estate inclusion inflated to 31 March 2013	8 899	Inflation 5.4% as per 2012/13 ROD
less Depreciation FY 2012/13	(1 276)	
add Capex FY 2012/13	3 320	Capex as per 2012/13 ROD
Durban International Airport(DIA)	1 850	
Closing NBV at 31 March 2013	**63 947**	**Opening Net Book Value for March 2013 tariff application.**

ANNEXURE B

TRANSNET NATIONAL PORTS AUTHORITY

WACC DETERMINATION

FY 2013/14

1. Estimating the cost of capital for TNPA

Introduction

1. WACC is an important input into the calculation of the TNPA's revenue requirements, which in turn will determine its approved tariffs in any given review period.

The Weighted Average Cost of Capital

2. The cost of capital represents the minimum return that a company must make on its investment in order to continue to attract capital, given the risks investors bear when they commit funds to the business. In the allowed revenues formula, the cost of capital represents the rate of profit TNPA is permitted to earn on its regulatory asset base. The product of the WACC and the RAB represents the total allowed profits (in Rand terms), before debt service, for the review period.

3. The cost of capital is typically measured using the Weighted Average Cost of Capital (WACC). The WACC takes into account main sources of possible funding for a company, debt and equity, and the relative gearing of the company, in order to determine a (weighted) average cost of capital for the firm.

4. Allowed revenues must be sufficient to cover, among other things, the company's tax expenses. The simplest way to reproduce the revenues required to cover the company's tax obligations is to apply the vanilla WACC and make a separate allowance for actual tax expenses.

5. The vanilla WACC formula is calculated as follows:

$$WACC = k_e(1-g) + k_d g \,,$$

Where:

- k_e is TNPA's estimated post-tax cost of equity;
- k_d is TNPA's estimated pre-tax cost of debt (i.e. the cost of debt free of any adjustment for the tax shield on interest); and
- g is TNPA's gearing (defined as the ratio of the value of debt to the value of debt plus equity).

Real vs. nominal

6. As the RAB is to be indexed to inflation and re-valued in nominal terms over time, the WACC to be applied to the RAB, in order to calculate the minimum allowed level of profit for the review period, must be expressed in real terms.

Tax treatment

7. Interest on debt (unlike payments to equity investors) is a tax-deductible expense. This provides the business a 'tax shield' on debt, which effectively lowers its financing costs. This tax shield needs to be accounted for in allowed revenues.

8. The simplest way to do this is directly through the tax expense term, T, in the allowed revenues formula. A forecast of the company's actual tax expense would, in expectations, automatically account for the effect of the tax shield. With this specification, the WACC used in the allowed revenues formula must, as described above, be the vanilla WACC.

9. Under this approach, no tax adjustment should be made to either the cost of equity or to the cost of debt. For the avoidance of doubt, the cost of equity in the vanilla WACC should be interpreted as a post-tax rate, and the cost of debt should be interpreted as a pre-tax rate.

Cost of equity

10. The real cost of equity to be used in the WACC formula, k_e, has been estimated using the Capital Asset Pricing Model (CAPM). The CAPM formula (which produces a post-tax cost of equity) to be applied for this purpose is usually expressed as:

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

Where,

- r_f is the real risk-free rate;
- β (beta) measures TNPA's exposure to market (non-diversifiable) risk; and
- MRP, the market risk premium, measures the premium (over and above the risk-free rate) that investors might expect to earn by investing in a fully diversified portfolio of all risky assets in the economy (i.e. "the market").

11. The exact way in which returns are measured and therefore the precise meaning of this formula is subject to some variation in the literature. The application of the CAPM needs to reflect the nature of the data used to estimate its parameters. This topic is discussed in more detail in the subsection on the MRP.

Risk-free rate

12. The cost of equity calculated using the CAPM is a post-tax return. Therefore, no further tax adjustment to the elements within the CAPM formula, including the risk-free rate, is required to arrive at a post-tax return.

13. There are essentially two ways in which the real risk free rate can be estimated:

One approach uses the average of historical bond yields adjusted for contemporaneous historic inflation; and

The other uses a current bond yield (or recent average of bond yields) adjusted for forecast inflation.

Both are commonly used by regulators and in this note the results of applying both approaches are described below.

Estimate based on historic averages

14. A risk-free rate of return is essentially a concept describing the theoretical rate of return of an investment with zero risk. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time. In theory, the risk-free rate is therefore the minimum return an investor would expect for any investment because he will not accept additional risk unless the potential rate of return is greater than the risk-free rate.

15. Transnet has previously employed the R186 SA government bond (10,5% coupon bond, issued Feb 2002 and expiring on 21/12/2025; 21/12/2026; and 20/12/2027) as a proxy for the risk-free rate for evaluating the expected return on their capital projects.

16. To obtain a forecast for the R186 bond yield, a quarterly macro econometric model was employed to generate a forecast for the yield-to-maturity (ytm) from existing data in the macro model. Unfortunately, the quarterly macro model only provides forecasts up to the end of 2017. For the period beyond 2017, a long-term structural annual model of the SA economy was employed to generate additional forecast points. As before, annual ytm data of the R186 bond was regressed on the long-term government bond index. Quarterly data was then obtained through interpolation and the risk free rates determined as per the below table:

2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
8.36	8.46	8.50	8.53	8.51	8.62

17. The methodology proposed that nominal yields be deflated using the rate of inflation measured using the Consumer Price Index (CPI), which is available from Statistics South Africa.

18. Ideally, the deflator used to convert this nominal yield into a real interest rate would be the expected inflation over the same term. However, there is no reliable estimate of longer term inflation available. The alternative is use a forecast of shorter term inflation. This approach involves the same conceptual mismatch between the inflation term and the bond term as the historic calculation. In the historic approach, there is an implicit assumption that the errors arising from this mismatch will average out over the period chosen. While the forecast approach loses the benefit of averaging, it has the advantage of being forward looking (and therefore consistent with the concept of the cost of capital).

19. The forecast of inflation for the review period used to deflate this nominal yield was derived using data from the Bureau of Economic Research (BER), which provides annual forecasts of inflation using the CPI index for 2013 and 2014. We took the mean of these two values in

order to obtain an average forecast inflation rate for 2013/14. This produced a forecast inflation rate of approximately **5.40%**.

Market risk premium

20. The MRP is the premium demanded by investors for investing in the market portfolio comprising all risky assets in the economy, instead of a riskless asset.

21. The MRP cannot be observed directly; it must be estimated.

22. Even though MRP is normally applied as though it is a forward-looking premium, its likely future size is typically inferred from long-run historical data. In particular, a common approach to estimating the MRP is to examine average historic excess returns on the market (i.e. the average spread between historic returns on a market proxy and the return on government securities) over a long period of time.

23. One of the best datasets available for this purpose is the one compiled by Professors Dimson, Marsh and Staunton (DMS), and published annually in the *Credit Suisse Global Investment Returns Sourcebook*. This dataset provides annual risk premium estimates for 19 countries, including South Africa, using historical returns data from 1900.

24. The main advantages of the DMS estimates are that they are independent, calculated in a consistent manner over time, and generally tend to be sensible values that are fairly stable from year to year.

25. When using DMS MRP estimates, there are two important choices that need to be made:

26. Firstly, should the excess market returns underlying the calculation be averaged using an arithmetic or geometric approach? The arithmetic mean measures the average of the annual returns for the period under consideration, whereas the geometric mean measures the constant annual return that compounded would be produce the same total return over the relevant period. For forward-looking analysis, and for the purposes of the CAPM, the arithmetic mean is the more appropriate measure.

27. Secondly, should the MRP be measured against bills or bonds? Excess market returns (i.e. market returns minus the appropriate risk-free rate) can be calculated either against short-run bills (i.e. with maturities of 12 months or less) or longer-dated bonds (i.e. with a maturity of 10 years). Since the risk-free rate to be used in the CAPM is measured using bonds rather than bills, it is appropriate for consistency to measure the MRP against bonds.

28. The above methodology would be the Authority's proposed method of calculating the MRP but, under the circumstances and the considerations of the non-finalisation of the tariff methodology, TNPA has taken the MRP used by the Port regulator in 2012/13 Record of Decision being 6.3%, which was based on the historic returns of the JSE over the last 75 years.

Summary of the cost of equity

29. The real cost of equity to be used in the WACC formula, k_e, has been estimated using the Capital Asset Pricing Model (CAPM). The CAPM formula (which produces a post-tax cost of equity) to be applied for this purpose is usually expressed as:

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

where,

- r_f is the real risk-free rate;
- β (beta) measures TNPA's exposure to market (non-diversifiable) risk; and
- MRP, the market risk premium, measures the premium (over and above the risk-free rate) that investors might expect to earn by investing in a fully diversified portfolio of all risky assets in the economy (i.e. "the market").

30. The exact way in which returns are measured and therefore the precise meaning of this formula is subject to some variation in the literature. The application of the CAPM needs to reflect the nature of the data used to estimate its parameters. This topic is discussed in more detail in the subsection on the MRP.

Cost of debt

31. There are two possible approaches to determining TNPA's cost of debt. The first is to obtain a forward-looking estimate of TNPA's cost of borrowing, and the other is to adopt the company's embedded debt costs.

32. Sub-directive 23(2)(b) of the Ports Directives states that the Regulator "must enable" TNPA to "recover its costs in maintaining, operating, managing, controlling and administering ports and its costs in providing port services and facilities". The cost of debt finance is such a cost. The requirement under sub-directive 23(2)(b) suggests that TNPA's actual, embedded debt costs should be used to determine the cost of debt applied within the WACC.

33. The closest observable proxy for TNPA's actual cost of debt is the average embedded cost of debt of its parent, Transnet Ltd. Additionally, using embedded debt costs would be consistent with the use of Transnet Ltd's capital structure as a proxy for TNPA's gearing.

34. Transnet Ltd's projected weighted average cost of embedded debt for 2012/13 is **9.76%**. TNPA used this as a measure of its cost of debt for the relevant review period.

35. Since a vanilla WACC is to be used, the cost of debt must be expressed as a pre-tax rate (i.e. free of any adjustment for corporation tax).

36. The nominal cost of debt was converted to a real rate using the Fisher equation:

$$k_d = \frac{1 + K_d}{1 + i} - 1$$

where,

- K_d is Transnet Ltd's embedded cost of debt, which is expressed in nominal terms; and
- i is the forecast of inflation over the coming review period, as derived earlier in, **5.4%**.

37. Applying the Fisher formula to TNPA's expected nominal cost of debt, using the one year forecast of inflation derived above, resulted in an estimated real cost of debt of **4.14%**.

Beta

38. Since TNPA is not a quoted company, it is not possible to estimate its beta directly from trading data. Under these circumstances, the most feasible approach for estimating its beta is the so-called 'comparator approach'.

39. In its 2011/12 tariff application, the Authority used 11 port companies as comparator firms for the purposes of estimating its asset beta. In its Record of Decision on that tariff application, the Regulator commented that the Authority "did not sufficiently argue the appropriateness of the selection as proxies for the NPA".

40. In its 2012/13 tariff application, the Authority expanded its list of comparator firms to 17 ports for the purposes of estimating its asset beta. Once again the Regulator was not convinced that the ports chosen represented an appropriate proxy for the Authority.

41. The nature and functioning of ports is varied and "no two ports are alike". This could possibly explain the concern raised by the Regulator in past RODs. The Authority therefore revisited its approach in terms of beta determination focusing on its operating environment. South Africa is highly integrated with the world economy, which plays a central role in shaping our economic prospects. Since 2000, the world has experienced unusually strong economic cycles and shocks, and these have been reflected in domestic demand and GDP growth. In the near term, South Africa will be affected by international trade and investment trends, and is vulnerable to changes in global demand.

42. The Authority provides a platform for the South African market (import & export) to trade and compete globally with 98% of seaborne cargo moving through the port system. The JSE Top 40 companies are fairly active in the domestic, regional and international space and their exposures to market risk can be considered a fair reflection of global risk. For this reason the Authority is of the view that the JSE Top 40 companies are a good proxy in order to determine an appropriate asset beta.

43. The equity beta data of the JSE Top 40 companies is obtained from Bloomberg. The Authority is of the view that the 5 year average equity beta should provide a fair reflection of the market risk avoiding the volatility of short term shocks and long term obsolete historic trends.

44. The asset beta is derived by de-levering the equity beta of the JSE Top 40 companies. In order to remove the effects of the capital structure of the JSE Top 40 companies the gearing levels of these companies needs to be established.

45. The gearing values for JSE Top 40 companies are calculated automatically by Bloomberg using the Top 40 Index which is considered to be one company. This index would effectively weight the shares and not cap any debt values where cash exceeded debt. The debt values have been taken on a quarterly basis (not semi-annual) and divide them by the equity values to get debt

to equity ratios for each quarter. An average for these values results in the determination of the level of gearing.

46.

Period	Equity Value	Cash Treatment of Debt	TOP40 Index Gearing
5 year average	Market value	Don't deduct cash	21.18%

47. In order to remove the effects of the capital structure of the JSE Top 40 companies the equity beta was de-levered using the estimated average gearing of the Top 40 Index of 21.18% and re-levered using the 36% gearing of the Authority.

48. There are several methods available to de-lever and lever betas. One of the most common is the Hamada formula which allows for tax but avoids the complexity and empirical difficulty of having to estimate debt betas. The Hamada de-levering formula is used to convert the equity betas of comparators into asset betas: The table below shows the formula to de-lever

$$\beta_a = \frac{\beta_e}{1+(1-t)\frac{d}{e}}$$

Where,

- β_a is the asset beta of the comparator;
- β_e is the equity beta of a comparator;
- d is the value of debt in the capital structure of the comparator;
- e is the value of equity in the capital structure of the comparator; and
- t is the rate of corporation tax in the country of domicile of the comparator

49. For consistency, we have used the re-levering Hamada formula to transform the average of the comparators' asset betas to an estimate of TNPA's equity beta

$$\beta = \overline{\beta}_a\left(1+(1-t')\right)\frac{d'}{e'}$$

Where,

- β is TNPA's estimated equity beta;

- $\overline{\beta}_a$ is an average of the comparators' asset betas;
- $\frac{d'}{e'}$ is TNPA's debt-to-equity ratio; and
- t' is the rate of corporation tax in South Africa.

50. The rate of corporation tax in South Africa is currently 28%.

51. Applying the Hamada re-levering to the average of the comparators' asset betas, using the parameters above, resulted in an equity beta estimate for TNPA of 1.2514.

Gearing

52. The Authority, as a division of Transnet Ltd, does not raise its own capital, so it is not possible to observe its optimal capital structure directly. A pragmatic solution to this problem is to assume that the Authority's historical average gearing is reflective of its capital structure.

53. Transnet Ltd resets the Authorities gearing to 45% every year, while the average gearing of the Authority is estimated at 36%. Therefore, for the purposes of re-levering TNPA's estimated asset beta, and also for the purposes of weighting between the costs of debt and equity, we have assumed a TNPA gearing of 36%. This is consistent with the gearing figure used by the Regulator in its 2011/12 determination.

Summary of WACC parameters

54. The table below summarizes the parameters used in determining the WACC for TNPA :

Description	FY 13/14 Rm
Risk-free rate (nominal)	8.36%
Risk-free rate (real)	2.81%
MRP	6.30%
Asset beta	0.8907
Equity beta (using Hamada)	1.2514
Gearing	0.36
Debt/equity ratio	56%
WACD (nominal)	9.76%
Inflation forecast	5.40%
Tax rate	28.00%
Cost of equity (real post-tax)	10.69%
WACD (real, pre-tax)	4.14%
WACD (real, post-tax)	1.54%
Real Vanilla WACC	8.33%