PORTS REGULATOR OF SOUTH AFRICA

Ports Regulator Framework Documents

2015/2016–2018/2019

The Umbilo, the sixth of nine new tugs, celebrating its launch in the Port of Durban.

COVER PHOTO:
Entrance channel to the Port of Durban.

Acknowledgements

The various documents were compiled under the guidance of the following Members of the Regulator (2007–2018):

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Foreword

The Ports Regulator of South Africa, created in terms of section 29 of the National Ports Act, (12 of 2005) started its operations in 2007 with the mammoth task of establishing an effective institution capable of determining efficient port tariffs in the South African system, and a regulatory framework that would be open, transparent and responsive to the needs of port users, the National Ports Authority and South Africa. The evolving regulatory framework comprises a Tariff Methodology, Tariff Strategy, Port Tariff Incentive Program, a Methodology for Valuation of Regulatory Assets and the performance incentive, Weighted Efficiency Gains from Operations.

Tariff methodology

The Regulator's work started with an interim tariff manual applicable for one year. The first three-year multi-year tariff methodology for 2015/16–2017/18 and the second for 2018/19–2020/21 was developed in consultation with international and local experts in regulation, industry and the public. The Authority is allowed to collect revenue and earn a return. The size of the revenue is determined by the variables, the formulae and the calculations set out in the Tariff Methodology.

Tariff Strategy

A tariff strategy was developed through extensive consultation starting with the Authority submitting a New Tariff Structure at the end of 2012 and calls for submissions from the public until 31 May 2013. A draft Tariff Strategy was developed and consulted on with users before being finalised and published in 2015, establishing the principle of cost reflective tariffs determining the incidence of tariffs collected from the major port user categories, in rebalancing tariffs in phases over a 10-year period.

Port Tariff Incentive Programme

The Regulator developed, consulted and launched the Port Tariff Incentive Programme (PTIP) which serves as the mechanism by which port stakeholders can apply for cross-subsidies within the port tariff structure. These can be quantified, assessed if beneficial to the economy, are fair, and in the public interest. The PTIP will support government's objectives for increased beneficiation, localisation and industrialisation.

Methodology for valuation of regulatory assets

The Methodology for Valuation of the Regulatory Asset Base of the National Ports Authority was developed to address concerns with the value of the opening and subsequent Regulatory Asset Base (RAB) on which a return is calculated and depreciation allowed to the Authority in the Required Revenue methodology.

Weighted Efficiency Gains from Operations

The Weighted Efficiency Gains from Operation published in March 2018 was developed with port users represented by Port Consultative Committees and the Ports Authority in each port. Based on five key performance indicators, the system rewards year-on-year improvements in performance and penalises deteriorating performance by allowing the Authority to gain or lose up to 5% profit for up to 10% increase or decline of measured performance on a proportional basis.

This compendium of selected Ports Regulator framework documents represents the outputs developed through rigorous consultation processes and published from 2015/16 up to 2018/19. The complexity of unravelling each framework element whilst responding to developments in the broader economic and policy environment, means that the framework is dynamic. The Regulator will continue to publish updates on its website. We are confident that these documents provide a rich insight to the journey travelled in addressing port pricing and efficiency over the past few years.

Mahesh Fakir
Chief Executive Officer
Ports Regulator of South Africa

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Port Tariff Methodology

for tariff years 2018/19–2020/21

Durban Container Terminal Pier One.

Celebratory spraying of water at the Port of Durban.

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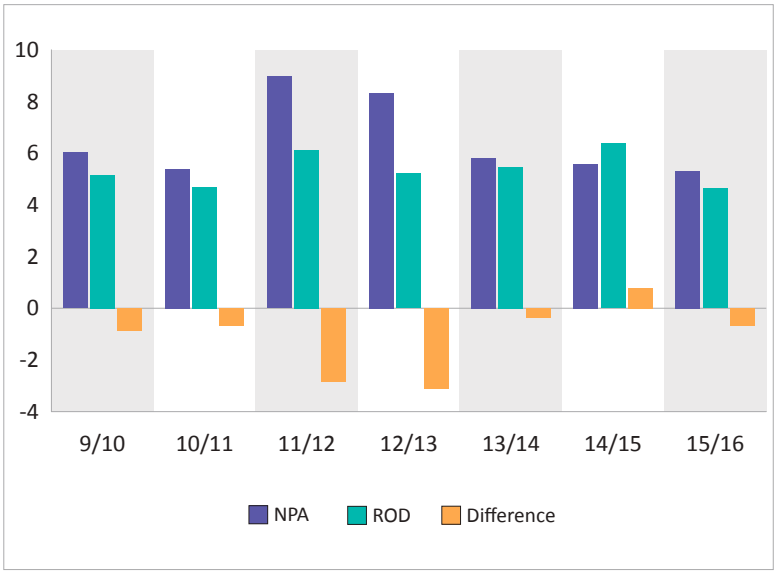
Introduction

The most recent tariff methodology (applicable from 2015/16–2017/18) has allowed a significant smoothing of the National Ports Authority's (NPA) return. At the same time, it has allowed the Ports Regulator of South Africa (the Regulator) to establish a lower tariff trajectory whilst still ensuring that the NPA remains profitable, as can be seen in *Figure 1* below.

Figure 1: **Return on Equity (last 5 years)**



This review of the Methodology has incorporated four rounds of public consultations in order to ensure sufficient input was received from stakeholders on the various elements of the Methodology. Interested parties had the opportunity to make input through oral representations during public hearings held in September and October 2016, as well as multiple rounds of requests for written comments, the latest closing the 20th of March 2017.

Significant strides have been made since the first Regulatory decision in 2009/10 and the determination of a multi-year tariff methodology in 2015/16 was yet another step in the process towards regulatory certainty. Whilst retaining the fundamental elements of earlier determinations, the last tariff methodology was multi-year in its approach, applicable to the 2015/16–2017/18 tariff years, and resulted in increased levels of transparency and consistency in the tariff setting process. This Tariff Methodology, applicable to the 2018/19–2020/21 tariff years, seeks to continue and strengthen the transparency and effectiveness of the regulatory tariff setting process whilst expanding its scope and providing greater focus on the embedded incentives inherent to the Tariff Strategy published in July 2015.

Background: The Regulator's Mandate

The Regulator's approval is required for the tariffs charged for services and facilities offered by the NPA in accordance with the National Ports Act, 12 of 2005 (the Act).

In terms of Section 72(1) of the Act, and Chapter 7 of the Directives of 2009 promulgated in terms of Section 30(3) of the Act as amended in 2010, the NPA must submit to the Regulator an application regarding the tariffs it proposes to charge for the services and facilities that it offers. The Regulator's approval of such tariffs is subsequently required. The Act, its Regulations, and the Directives constitute the South African Ports' Economic Regulatory Framework which, amongst other instruments, allows for a transparent tariff setting process.

On an annual basis, the NPA submits its tariff application to the Regulator. The Regulator takes into consideration the Application, all subsequent submissions, written and oral comments received during the consultation process, including the responses thereto, as well as conducts its own research prior to publishing a Record of Decision (ROD).

Since the commencement of economic regulation with the 2009/10 ROD, the Regulator has issued, on an annual basis, a ROD for each application year in which an assessment of the NPA's compliance with the Regulatory Framework has been made. All RODs have contained an outline of corrective action required.

Furthermore, the Regulator has formulated a long term Tariff Strategy which is based on a 'use and benefit' approach to cost allocation. The Strategy depends on the adapted Revenue Requirement (RR) approach to allocate costs to specific user groups. Tariffs from 2017/18 onwards will be adjusted in accordance with the consulted and adopted Tariff Strategy.

The Multi-Year Methodology in Context

The 'Multi-year' tariff methodology in the current instance refers to the calculations of tariffs for the period 2018/19–2020/21 based on a single methodology with an extended treatment of the Capital Works in Progress (CWIP) in the Regulatory Asset Base (RAB) calculations.

The multi-year tariff application has different calculations for each tariff year in the tariff period, consisting of forecasts and calculations of each of the components of the Required Revenue (RR) approach. Annual adjustments to the values of the components will be taken into account through a claw-back (or give-back) mechanism.

The NPA publishes a revised tariff book of all prices reflecting the decisions of the Regulator as set out in the Record of Decision (ROD), for the first year of each rolling multi-year period. In addition, the NPA is required to submit, as part of the application, any proposed changes to the existing tariff book that will reflect increases (or decreases) different from the average tariff increase applied for.

Port Tariff Methodology for tariff years 2018/19–2020/21

Methodology Period

The Regulator has previously allowed for an annual review and an annual adjustment of tariffs within a three-year period as opposed to fixing the prices for the period; this is intended to protect users from possible large step changes in the tariff. In addition, unlike other regulated industries such as electricity or oil and gas pipelines, there are large variations in the users and usage of port infrastructure and

services. Therefore, an annual review allows a more efficient and appropriate allocation / distribution of prices to port users rather than an adjustment after three years.

This Tariff Methodology allows for an annual review and adjustment of tariffs within a three-year period, the NPA will be required to apply for a fixed tariff adjustment for the year under review and provide two indicative tariffs for the outlying years. This in turn allows the Regulator, and port users, to take a medium term view of the operational expenses, volume, and tariff trajectories, whilst at the same time provides the Regulator with the flexibility to adjust in the short term for economic or other external impacts. Capital Works in Progress (CWIP) will however be treated in a different manner as an extended period of fixed capital expenditure will be allowed, with a RAB reset implemented only after a six-year period, or shorter periods if formally requested by the NPA. This will allow the NPA long term certainty regarding their Capex allowances. *See section on Regulatory Asset Base.*

Proposed Tariff Methodology: An Overview of the Elements

Rate of Return Regulation: Revenue Required (RR) Methodology/Revenue Cap

The Rate of Return regulation method is often used to determine fair and reasonable prices for all parties. The prices are reasonable as they allow a company the opportunity to recover its costs, as well as earn a fair return on capital employed. At the same time, the method protects customers from paying excessive monopolistic prices, with the argument being that monopolistic firms should be required to charge the price that would prevail in a competitive market.

The Revenue Required[1] methodology is one such method that uses the Rate of Return as it enables the firm to make a reasonable return on their assets after covering all operating costs, depreciation and taxes.

This approach further satisfies the requirements of the Act which states that the Regulator must ensure that the approved tariff allows the NPA to:

- Recover its investment in owning, controlling and administering ports and its investment in port services and facilities;
- Recover its costs in maintaining, operating, controlling and administering ports and its costs in providing port services and facilities; and
- Make a profit commensurate with the risk involved in ports services and facilities.

An assessment of the various components of the RR formula are required in order to determine a feasible outcome. In regulatory practice, tariffs for outlying future years are based on forecasts of

NPA's state-of-the-art tugboats under construction in Durban.

[1] The inclusion of a claw-back mechanism results in the Required Revenue approach closely reflecting a Revenue Cap. For purposes of consistency in terminology we continue to use the term Revenue Requirement (RR).

various considerations. As a general rule, the longer the forecast period is, the less accurate the forecasts towards the end of the period are likely to be. In time, forecasts can be replaced with actual data for the forecasted variables and when sufficient actual data is available for a tariff year, the tariff is recalculated. Claw-backs or give backs are then calculated to offset any differences. This calculation and subsequent claw-back will be completed each year of a multi-year tariff decision, as has been the practice of the Regulator. As actual data for tariff Year One will only be available in tariff Year Two, the applicable claw-back or give back, if any, will only be fully implemented in tariff Year Three.

Actual volumes will replace estimates for the calculation of claw-backs or give backs. For future years, more up to date forecasts may be more accurate and in turn lead to smaller tariff adjustments. Such newer forecasts could be implemented each year at the same time that changes as a result of claw-backs or give backs are implemented. In years when there are large volume changes, using more recent volume forecasts may reduce the size of the claw-back or give back. However, annual volume forecasts will make the calculation of claw-backs or give backs much more complicated involving multiple claw-backs for a particular year, and thus more prone to human error. However, the use of a three-year period in the current methodology includes a mid-period adjustment, that should, in theory, reduce the volatility over the period as a result of the claw-back.

As the Regulator has utilised the RR approach for determining tariff amendments in response to the NPA's annual tariff applications. The Regulator proposes a continuation of this approach for the 2018/19 – 2020/21 financial years, with some changes as set out below.

The formula for the RR methodology is as follows:

Revenue Requirement
= Regulatory Asset Base (RAB)
× Weighted Average Cost of Capital (WACC)
+ Operating Costs + Depreciation + Taxation Expense ± Claw-back
± Excessive Tariff Increase Margin Credit (ETIMC)
± Weighted Efficiency Gains from Operations (WEGO)

The above formula reflects a standard building block approach to setting the revenue requirement of a regulated service provider and has been used by the Regulator in a similar manner in previous tariff determinations. This approach accords with the rate-of-return revenue requirement calculations by Regulators in South Africa as well as internationally (as modified in the ports regulatory practice over time) and has been used as the basis for assessments by the Regulator in preceding tariff periods.

The methodology requires that the NPA estimate its operating costs, depreciation, taxation expenses and return on capital (a product of the Weighted Average Cost of Capital (WACC) and the value of assets in the RAB for the period under review).

In addition, the methodology contains a claw-back mechanism that corrects for over or under recoveries in previous tariff periods, as well as the Excessive Tariff Increase Margin Credit (ETIMC). The ETIMC mechanism allows for large increases in required revenue and/or tariffs that may arise from volume volatility or substantial

capital expenditure programmes in future years to be partly offset by moderately higher tariff increases in the short-term.

Whilst the Methodology as set out below contains an efficiency variable (the Weighted Efficiency Gains from Operations) and will incentivise operational efficiencies, the Regulator still retains the right to include, at any time during this methodology period, positive incentives in support of any national objectives or positive operational or financial outcomes in the Records of Decision.

The exposition of the Revenue Requirement approach is:

$$RR = (v - d + w)\ r + D + E + T \pm C \pm ETIMC \pm WEGO$$

Where:

RR	=	*Revenue Requirement*
v	=	*Value of the assets used in the regulated services*
d	=	*Accumulated depreciation on such assets*
w	=	*Working Capital*
r	=	*Regulated Return on Capital*
D	=	*Depreciation accounted for in the period of the tariff*
E	=	*Operating costs (OPEX)*
T	=	*Taxation expense*
C	=	*Claw-back*
ETIMC	=	*Excessive Tariff Increase Margin Credit*
WEGO	=	*Weighted Efficiency Gains from Operations*
(v – d + w)	=	*Regulated Asset Base*

Regulatory Asset Base (RAB)

The RAB represents the value of those assets the NPA is allowed to earn a return on. As the return earned on these assets is expressed in real terms, the value of total assets in the RAB is indexed to inflation each year – the Trended Original Cost (TOC) approach. Each year, estimated capital expenditure (Capex) and depreciation is added to the closing balance for the previous year to arrive at an updated closing balance for the current year. The expected working capital balance is added to arrive at a total RAB estimate, which is averaged over the year to account for the progressive spending of capital works in progress (CWIP) over the period.

Calculation and Adjustment of the RAB

In the previous tariff determinations, the Regulator accepted the Depreciated Optimised Replacement Cost (DORC) method used by the applicant for certain assets to determine an opening RAB. However, the Regulator retains a low level of confidence in the RAB determined through the 2008 DORC method. Whilst this method gave rise to a steep increase in the asset values, regulatory certainty was required in the absence of any alternative. The Regulator retains these concerns and has since commenced an independent process that will form subsequent RAB assessments. The process is intended to assess the

Straddle carrier in action at the Durban Container Terminal.

application and appropriateness of these valuations and valuation methodologies for major assets.

As such, the development of a Regulatory Valuation Methodology will complement this Methodology and will provide rules for future valuations of the RAB as well as the rebasing of the NPA's RAB. These rules will not only determine the applicable valuation methodologies for the different asset classes, but will guide the treatment of CWIP, depreciation, as well as 'end of useful life' concerns. The finalisation of a valuation methodology will allow the Regulator to make ongoing adjustments to the RAB as independent views on the values in the asset base becomes available over the regulatory period.

The Regulator may finalise an assessment on any asset or part of the RAB during the period and will reflect the appropriate changes in the next ROD to affect the RAB value in the following tariff year.

The RAB value for the period under review is be determined using the following formulas:

$$\boldsymbol{RAB_y = \frac{1}{2}\left[RAB_{c,y} + RAB_{o,y}\right] + w_y}$$

$$\boldsymbol{RAB_{c,y} = RAB_{o,y}(1 + CPI_Y) + CWIP_Y.(1 + CPI_y) - D_y}$$

Where:

RAB_y	=	*value of the RAB used to determine the returns for the period y*
$RAB_{o,y}$	=	*opening value of RAB for the period y*
$RAB_{c,y}$	=	*closing value of RAB for the period y*
w_y	=	*forecast average net working capital over period y*
$CWIP_Y$	=	*value of expected capital investment over the period y*
D_y	=	*depreciation allowance for assets over the review period y*
CPI_Y	=	*annual rate of general inflation expected over the period y*

Depreciation

The fundamental contextual decision for the Regulator in determining the appropriate application of depreciation centres around the aim of regulation, specifically the intention to satisfy the principle of financial capital maintenance. Currently, to fully take into account capital expenditure and inflation, the following formula is used in the calculation of depreciation:

$$Depreciation = (RAB_{(o,y)} + (RAB_{(o,y)}.CPI_{(y)}) + (Capex_{(y)}/2.CPI_{(y)}))/40$$

It must be noted that the completion of the Asset Valuation Methodology and on the implementation thereof, the Tariff Methodology might see more asset specific depreciation rates being used as opposed to an average asset life of forty years. The treatment of assets that have exceeded their expected life-span and/or depreciation periods will be articulated in the Valuation Methodology which will be published for public comment in the 2017/18 Tariff Year.

Inflation Trending

The inflation rate for calculating the trend in the value of assets between rebasing periods will be the appropriate Price Index forecast for each asset type in each financial year during the tariff period. The same inflation rate is used in the calculation of the Weighted Average Cost of Capital (WACC).

Due to the Regulator finalising a ROD by 01 December, it will not be possible to utilise a final National Treasury published CPI figure. The Regulator will therefore utilise estimates from the National Treasury's October/November publication of a CPI figure, the South African Reserve Bank, the Bureau of Economic Standards, other institutions, as well as its own economic forecasts in its assessment of future price changes.

Capital Works in Progress (CWIP)

Detailed projections for the tariff period, per asset class, per service, and per project, as well as monthly planned expenditure schedules are to be submitted by the NPA, to the Regulator, with the annual Tariff Application. These projections are to serve as motivation for the inclusion of the CWIP in the RAB. All Capex which has been approved and not fully implemented is taken into account as part of the claw-back process and the RAB and its Return are adjusted accordingly. This process will however only take place every six years (or shorter if formally requested by the NPA) in order to allow the NPA the space to implement Capex projects set out in the Tariff Application of year one of the Tariff Methodology.

The Regulator has in the past relied on the Port Consultative Committees (PCCs) to 'in principle' approve or support the NPA's Capex requirements, however, the extended six-year project plan (to span the review of this Methodology) will require Regulatory approval. The NPA's ability to implement projects, recent Capex implementation

Table 1: **Tariff Application Process**

2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
NPA six-year Capex plan presented to PCC's and approved, by the Regulator, for inclusion in RAB, subject to prudency assessments. The 2018/19 RAB assessment will confirm the Capex program and RAB annual Capex inclusions for 2018/19–2023/24 as per the approved NPA Capex Program/plan limited to one year's business cases.	RAB adjusted for Tariff Assessment 2019/20 (including trending estimates, working capital, and inflation impact on depreciation calculation) and claw-back calculated. Capital Works in Progress to remain as per 2018/19 Tariff Application limited to two year's business cases.	RAB adjusted for Tariff Assessment 2020/21 (including trending estimates, working capital, and inflation impact on the depreciation calculation) and claw-back calculated. Capital Works in Progress to remain as per approved Capex plan submitted in 2018/19 Tariff Application limited to three year's business cases.	RAB adjusted for Tariff Assessment 2021/22 (including trending estimates, working capital, and inflation impact on depreciation calculation) and claw-back calculated. Capital Works in Progress to remain as per approved Capex plan submitted in 2018/19 Tariff Application.	RAB adjusted for Tariff Assessment 2022/23 (including trending estimates, working capital, and inflation impact on depreciation calculation) and claw-back calculated. Capital Works in Progress to remain as per approved Capex plan submitted in 2018/19 Tariff Application.	RAB adjusted for Tariff Assessment 2023/24 (including trending estimates, working capital, and inflation impact on depreciation calculation) and claw-back calculated. Capital Works in Progress to remain as per approved Capex plan submitted in 2018/19 Tariff Application.	Starting RAB for 2024/25 adjusted for actual Capex performance based on 2018/19–2022/23 Capex reviewed performance. Audits will be conducted on physical and financial assessments, e.g. inspections, Bills of Quantities etc.

record, as well as the appropriateness of the Capex plan will be taken into consideration. In addition, each project in the application must contain the underlying motivation (business case) for all Capex projects, including volume projections etc. (See Annexure A for Additional Information Requirements). Whilst the NPA will be allowed to approach the Regulator to amend the RAB within the cycle, any amendments will require the same rigorous probity assessment. This is particularly important in the early stages of the implementation of the methodology during the ramp up in terms of business case submissions.

As such, the assessment of determining the final closing balance at the end of the Capex period will require an assessment of actual achievement of the approved Capex plan. This will require an assessment of the various construction elements including disbursements, actual outputs, and cumulative project specific Bills of Quantities. In Year Five of the six-year period, a five-year final output and a latest assessment of the estimated completion for Year Six will be used to establish the starting RAB for Year Seven (2024/25).

Working Capital

The regulatory purpose of the RR approach is to determine the revenue required by the NPA to recover its costs and an appropriate return. This must include the concept of the time value of money as in many (most) cases, the time at which a particular cost is incurred is not necessarily matched with the associated tariff. Therefore, capital is required to cover the time delay, however there is a cost associated with the additional capital requirement. In order to correct for the inherent assumption in the RR approach (that expenses and revenues occur at the same point in time), an allowance for the time difference is included.

The estimate of working capital included to adjust for the cash requirements related to Capex requirements, equates to the actual net working capital as per the latest available NPA annual financial statements (not the change in working capital), consisting of accounts receivable plus inventory less accounts payable (i.e. operating cash is excluded), adjusted by forecast volume growth and CPI inflation for the following year. In addition, CWIP payables, which are estimated at $1/12^{th}$ of the capital expenditure projected for that year is included. Volume and CPI forecasts used in the calculation of outer years' working capital will be updated as and when these numbers become available as part of the claw-back mechanism.

Weighted Average Cost of Capital (WACC) – Vanilla WACC

In general, the WACC represents the risk adjusted opportunity costs of capital, and is the minimum return for an investment in order to continue to attract capital, given the risks.

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

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

Where:

k_d	=	*pre-tax cost of debt*
k_e	=	*post tax cost of equity*
g	=	*gearing, which is debt over total capital*

Cost of Equity (k_e)

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

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

Where:

Rf	=	*Real risk free rate*
β	=	*Measure of NPA's exposure to market (non-diversifiable) risk*
MRP	=	*The market risk premium measuring the premium over and above the risk free rate that investors might expect to earn*

The exclusion of the return on equity from the claw-back calculation ensures that the use of a CAPM calculation establishes a determined risk premium above the Risk Free Rate (RFR), significantly reducing the NPA's revenue risk as well as additional tariff volatility.

Risk Free Rate (rf) (RFR)

In establishing a risk profile for a regulated entity like the NPA, the main risk facing the business is that of the interest rate. In addition, cost uncertainty and regulatory risk further contributes to their risk profile. With regards to the latter two risks, namely cost uncertainty and regulatory risk, the RR methodology, as implemented by the Regulator in this instance, adequately covers the perceived risk. In the first instance, the granting of operational expenditure as a revenue item and the inclusion of a claw-back, together with a transparent tariff methodology sufficiently compensates the NPA for the associated risk. To compensate for the interest rate risk, regulators are generally in agreement that longer dated government bonds should apply for two reasons, firstly to retain consistency in the calculations, the RFR should be set on a basis that is consistent with other variables in CAPM, notably the MRP. Secondly, to ensure alignment with the average length of remaining life of an asset in the RAB or at least the remaining debt maturity periods.

This methodology utilises the South African Reserve Bank's published time series KBP2003M 'Yield on loan stock traded on the stock exchange: Government bonds – 10 years and over' in order to avoid anomalies in single data series bond as an appropriate measure of the RFR, and is seen to adequately reflect the market's perception of sovereign risk and inflation over the regulatory period. The average RFR is calculated as a monthly average over a five-year period.

The Real RFR is deduced by using the Fisher Equation.

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

Where:

i	=	*Nominal rate*
r	=	*Real rate*
E(I)	=	*Expected inflation*

The Port of Cape Town with the Green Point Stadium in the foreground.

Market Risk Premium (MRP)

The MRP is in essence forward-looking and therefore cannot be observed but must rather be forecasted. A general consensus exists that the historical premium is, in fact, the best estimate of the forward looking MRP. For this purpose, the Regulator uses the latest available Dimson, Marsh and Staunton (DMS) estimate of the mean MRP as measured against bonds for South Africa to determine an MRP for the NPA's cost of equity calculation. The existence of negative serial correlation in the returns on South African equities results in an overestimation of the MRP when using the arithmetic mean. In addition, the relative (and recent) changes in terms of market diversification, improvements in the regulatory and legal frameworks safeguarding investors points to the appropriate risk premium forecast to be at the lower end of the long term view. As such the Regulator will retain the use of the geometric mean of the DMS MRP.

In addition, the calculation of the MRP average is done over the full period available in the DMS data set as the cost associated with the larger standard error of a shorter period surpasses any advantages of a more updated MRP.

Beta (ß)

As the NPA is not a traded company, there is no published beta (β) which reflects its risk relative to firms listed on the Johannesburg Stock Exchange (JSE). Therefore, a β has to be set in order to reflect the risks faced by the NPA under the RR methodology that will ensure an appropriate return (for the risk faced).

The inclusion of a claw-back mechanism reduces exposure to systematic risk and the existence of an interventionist regulatory regime requires the Regulator to use a β substantially lower than that of large firms listed on the JSE such as the JSE top forty. In addition, the unique nature of the NPA (a regulated monopoly with an implied government guarantee) makes any comparison with other port companies impossible.

As such, the consistent returns allowed by the Regulator and the claw-back mechanism that effectively removes systemic risk (mainly through decreasing volumes) combined with the view that the β must be considered as endogenous to the methodology applied, argues for a lower beta. However, due to the complexity of establishing the correct β, the Regulator will apply an asset beta of 0.5 over the period, and will define an appropriate level of the asset β prior to the review of the Tariff Methodology in 2019/20.

The Hamada equation will then be used to re-lever the beta to result in an equity β.

Gearing (*g*)

The Regulator, taking into consideration previous applications, previous patterns of variation in the applications, various submissions, and its own analysis of the NPA's gearing, has determined that an appropriate gearing for the entity for the period is 50%. Further, this reflects a median position in a sample of ports as well as adequately signalling a required reinvestment of profits into the port system whilst balancing costs with a lower cost of debt.

Cost of Debt (k_d)

NPA's *actual,* embedded (adjusted for an *effective weighted*) debt costs should be used to determine the cost of debt applied within the WACC. The use of the Transnet Group short term *vs* long term debt structure will be applied to determine an efficient deemed short term *vs* long term debt ratio for the NPA.

The NPA is required to submit the initial calculation of the variable as well as revised average embedded debt costs, based on the average embedded NPA allocated Transnet Group cost of debt on a group level, on an annual basis as part of the annual tariff application. This forecast will be corrected on an annual basis based on audited financial information through the claw-back mechanism.

Taxation Expense (T)

The Regulator will accept the current corporate tax rate of 28% (t) (to be adjusted if amended by the National Treasury) adjusted for a proportional Transnet Group taxation rate for the period. As the current corporate structure of Transnet enables the Group to offset profits of one operating division against losses elsewhere, a taxation allowance granted to the NPA may result in increased regulated tax revenue, whilst a reduced taxation liability exists on a group level. A proportional tax rate, based on the assumption that the NPA is treated as an operating division, as opposed to a subsidiary of Transnet Group, will be calculated and corrected through the claw-back mechanism. The effective rate will be calculated as a ratio of the Transnet taxation liability due under the current corporate structure to a calculated Transnet Group tax liability under an assumption of subsidiaries based on the before tax profits as published annually in the Audited Transnet Group Annual Financial Statements.

The Vanilla WACC will be applied to the average RAB for the period under consideration, less the interest cost of debt, and wear and tear, and other tax allowances.

Any over or under recoveries in terms of the estimated *vs* actual taxation allowed due to 'group effects' will be included or offset in the ETIMC facility.

Operating Costs

The Regulator currently analyses the operating cost estimates for the period on a detailed line by line item basis. The NPA is requested to provide detailed and complete motivation for each of the expenses applied for, especially on large items such as labour and energy costs.

The Regulator continues to allow the inclusion of the Transnet Group costs in the total allowed expenses, subject to the requirement that the NPA submits detailed explanations and motivations for the amounts to be transferred to the Transnet Group. These are expected on a level of detail that will allow assessment of its necessity, as well as the actual services/goods received, and for which function of the NPA it will be utilised. Adjustments are made on an annual basis if and when the Regulator determines any group cost component to be inappropriate based on audited reports.

In addition, the NPA shall provide an externally and independently audited financial report (with all supporting documentation and

Christening of the first of National Ports Authority's nine new tug boats – Mveso.

detailed explanations including basis of allocation and policy documents that support such allocation) on all line items that form part of the group costs that have been expended for the NPA each year. This shall be provided in the year after the close of the financial year or until an alternative methodology or amendment of this methodology is published.

Furthermore, the Regulator reserves the right to claw-back all or any portion of the amount in future tariff decisions, should the Regulator not be satisfied that the expenditure is within the scope and mandate of the NPA, and that the amounts are reasonable, or reasonably allocated to the NPA.

Comprehensive information requirements must be met with for each application. See Annexure A.

Claw-Back

The key purpose of applying claw-backs is to ensure that the NPA or any port user is fairly treated and is not subjected to unfair gains or losses that are the result of incorrect forecasting, inaccurate information and system shocks. This includes the reducing and the sharing of risks faced by all port system participants including the NPA. Its main application is to reduce the impact of differences between Allowed Revenue (based on a number of forecasts and assumptions) calculated at the time of the tariff application, and actual audited figures, and is intended to ensure the coherence and integrity of the regulatory regime. The volatility of trade volumes and the difficulty in forecasting imports and exports accurately presents significant problems, especially regarding the prediction of volumes in outer years of a multi-year tariff period.

However, the following variables that are estimated (in line with the Regulatory Manual) on an annual basis, prior to the start of the following tariff year, for claw-back purposes are the:

- **RAB (excluding Capex):** The RAB is adjusted annually to reflect actual working capital requirements in line with Annual Financial Statement (AFS) numbers and inflation trending;
- **Depreciation:** Depreciation is recalculated based on the adjusted RAB;
- **Volumes:** Actual volume numbers are used to calculate the claw-back; and
- **Inflation (CPI):** Whilst the return on equity does not change, the actual inflation rate is used in the recalculation of a number of variables, including the trending of the RAB, working capital forecasts, and other latest estimates during the assessment.
- **Taxation (TAX):** The taxation allowance will be corrected to adjust for the 'Group effect' based on Transnet Group actual audited financial statements.

The forecast or estimation of these variables is conducted annually and actual data is used in determining the claw-back pertaining to the previous tariff year where the 50% rule applies. The final claw-back is determined in the following year when actual numbers are available.

Excessive Tariff Increase Margin Credit (ETIMC)

The Regulator regulates in the long term interest of the industry. This requires that the Regulator not only confine itself to the immediate tariff decision, but also considers ways to ease any future shocks to the system. It is generally accepted that capital expenditure may spike at some point in the foreseeable future, but that these projects have not as yet been specified to a level of detail that allows for accurate prediction. In addition, external market related factors such as unexpected (or expected) fluctuations in volumes, inflation, the RFR etc. may result in significant spikes to the tariff as well.

As such, the Regulator has, in the past, considered it prudent to avoid excessive future tariff changes by retaining and increasing the NPA's Excessive Tariff Increase Margin Credit (ETIMC), in order to allow the smoothing of unaffordable tariff spikes over multiple periods in the future.

As the ETIMC is 'revenue collected from port users' before the NPA is entitled to it, it should yield a return for users to compensate them for the opportunity cost of their capital. The ETIMC will therefore earn a return which is equal to the WACC allowed by the Regulator as the opportunity cost of the fund available to the NPA is indeed the WACC. The return on the ETIMC will be factored into the balance and the calculation of the total available under the ETIMC facility will be published annually.

Currently, the Regulator further deems it necessary to define the use of the ETIMC facility in the following way:

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

Volume Forecast

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

Introduction of an Efficiency Incentive

The incentives built into the RR methodology do not favour increased efficiency or competitiveness as the claw-back mechanism takes away the gains from higher efficiency with additional market volume effects. This must therefore be addressed in an integrated way through the inclusion of an efficiency measure within the RR methodology. Whilst the introduction of efficient pricing through the Tariff Strategy will have positive effects, these will only impact over the long term. An approach is then required, on a more urgent basis, to identify and differentiate between volume gains (or volume losses) due to efficiency impacts and market effects. The introduction and continued evolution of the Terminal Operator Performance Standards (TOPS), Rail Operator Performance Standards (ROPS), Road Operator Performance Standards (HOPS), as well as the Marine Operators Performance Standards (MOPS), is of high interest to the Regulator.

The 750m³ grab hopper dredger, the Italeni, at the Port of Durban.

The measurement and monitoring role that the operator performance standard systems play will produce an input for the tariff system in order to establish more transparent and concrete incentive targets with benefits to both the port owner as well as port users.

In particular, **the inclusion of an efficiency variable Weighted Efficiency Gains from Operations (WEGO) is proposed as set out in the RR formula (page 10) where:**

$$WEGO_t = EG_{t-1} \times 0.05 \times Re_{t-1}$$

Where:

Efficiency Gain (EG) = Agreed efficiency gain through operations, excluding the effect of market driven volume growth.

Return on Equity (Re) = return on equity as determined in the ROD.

Table 2

Composite Ports System Efficiency Gain % as calculated	EG for inclusion in the WEGO formula
≥10%	1
9%	0.9
8%	0.8
7%	0.7
6%	0.6
5%	0.5
4%	0.4
3%	0.3
2%	0.2
1%	0.1
0%	0
-1%	-0.1
-2%	-0.2
-3%	-0.3
-4%	-0.4
-5%	-0.5
-6%	-0.6
-7%	-0.7
-8%	-0.8
-9%	-0.9
≤-10%	-1

EG will be a weighted average growth rate of a selected group of audited performance results on a port by port basis. These key performance indicators, as well as the appropriate weightings for every port, will be selected by the Regulator in consultation with port users through the PCC process as well as with the NPA. It will be required that the *WEGO,* TOPS and MOPS *results* must be signed off by PCC representatives at a port level and agreed to with the Regulator.

For the calculation of operational efficiency, port revenue contribution will establish the weighted contribution on a per port basis to calculate the overall EG, however, all ports' PCC's must present signed off results to the Regulator for consideration and inclusion in the tariff Assessment.

No cap on efficiency gains will be imposed, however, targets below a previous year's target (the Baseline) will not be allowed. A declining or negative value of EGt-1 will result in an increased claw-back over period *t*.

Figure 2: **Operational Performance Calculations**

Determination of applicable KPI basket and weights on port level. PCC and NPA port specific KPI's presented to all port users and agreed.

Regulator approves port specific KPI's for inclusion in WEGO.

Establish audited base line for KPI measurement.

Implement WEGO and measure against baseline.

Weight port consolidated number by port revenue for overall port system number.

Compare with previous year i.e. translate hours/ throughput etc. into % change and calculate WEGO value based appropriate EG value.

The Regulator will, during the final year of the previous tariff methodology (2017/18), develop and consult on key performance indicators that will form part of the WEGO over the Tariff Methodology period. The approved results from 2017/18 will form the baseline for measurement in the first year of this Tariff Methodology (2018/19).

The process and requirements from of the different role-players in establishing the key performance indicators for inclusion in the tariff setting process is outlined below.

Table 3

Process	2017/18	2018/19	2020/21
Process for Port Users	Port by Port KPI determinations		
Process for NPA	Port by Port KPI determinations presented to port users by NPA. Report on achieved performance to PRSA by year end to establish a baseline.	Report to PRSA on actual performance.	Application to include a report on actual Audited KPI performance.
Tariff Setting Process	Regulator to approve final Port by Port and national KPI's.	No action required.	Implement WEGO as per audited KPI performance through the Claw-Back Mechanism.

Mr Thabadiawa Mufamadi
Chairman of the Ports Regulator of South Africa
30 March 2017

Annexure A: Information Requirements

The following information requirements must accompany the annual application of the NPA.

- All Capex projects (infrastructure and capital acquisitions) underway (to include, but not limited to, information pertaining to project stage, tender specifics, construction progress etc.) as well as business cases for all proposed Capex inclusive of volume forecasts for the full six-year period under consideration;
- Business cases must be provided on all Capex projects in excess of R10 million in the following stages:
    - For the FY2018/19 tariff application, business cases for only one year will be required, i.e. FY2018/19;
    - For the FY2019/20 tariff application, business cases for two years will be required, i.e. FY2019/20 and FY2020/21; and
    - For the FY2020/21 tariff application, business cases for three years will be required, i.e. FY2021/22, FY 2022/23 and FY2023/24.
    - The nature of the content and detail of business will be further defined and developed between the Authority and the Regulator. Furthermore, the nature and content of the business case submissions would be summarised to focus on the more salient aspects including:
        - Objective of project
        - Demand to be addressed
        - Alignment to Port Development Plans
        - Solution alternatives
        - Project Costing
        - Financial Returns and Payback periods
        - Timing of Delivery
        - Key Risks
- All acquisition of land and other Capital Assets (including motivation thereof);
- All disposal/or removal of land and assets (including motivation thereof);
- Lease Register setting out all lease information;
    - Copies of all new agreements and licences entered into or issued in the quarter, as well as the supporting documentation thereof, including Sections 79s, 72s, 56s, 57s, and lease agreements (inclusive of all annexures, including but not limited to updated rentals and terminal operator tariffs); and
    - All applicable B-BBEE certificates for the above mentioned licences and agreements;
- Data, results and progress applicable to the implementation and monitoring of Operator Performance Standards, as per TOPS/ MOPS/ ROPS/ HOPS;
- Key performance indicators relating to port capacity, port performance, volumes and maintenance programmes per port as determined by the Regulator;
- Audited Financial Statements (NPA and Transnet Group);
- Historical information: All NPA relevant annual debt stock levels as well as annual debt redemption payments itemised, as well as the relevant debt instruments and applicable interest/coupon rates since the inception of Regulation;
- Current debt cost information including estimated debt costs (calculation and forecasts) for the current tariff year (i.e. the year that the application is made in) as well as the outlying tariff year. Also reflect the estimated annual change in to NPA relevant debt stock levels as well as annual debt redemption payments itemised, as well as the relevant debt instruments and applicable interest/coupon rates; and
- Itemised maintenance schedule for the next three years for all planned and unplanned maintenance projects above R1 million, categorised as Opex as well as 'capitalised maintenance'.

section 2

Tariff Strategy

for the South African Ports System 2015/16

Tandem-lift cranes at the Port of Durban.

Ship sailing from the Port of Cape Town.

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Introduction

Mandate of the Ports Regulator with regard to Tariff Approval

In terms of Section 72(1)(a) of the National Ports Act (Act No. 12 of 2005) (the Act), the National Ports Authority (NPA) is required, with the approval of the Ports Regulator (the Regulator), to determine tariffs for services and facilities offered by the NPA and to annually publish a tariff book containing those tariffs. In addition, the Regulator, in terms of section 30(1)(a) is required to "exercise economic regulation of the ports system in line with governments objectives". The Directives in terms of Section 30(3) of the Act, which were approved on the 13th July 2009 (gazetted on the 6th August, 2009) and amended on the 29th of January 2010, require that the Regulator,

- Recover its investment in owning, managing, controlling and administering ports and its investment in port services and facilities;
- Recover its costs in maintaining, operating, managing, controlling and administering ports and its costs in providing port services and facilities; and
- Make a profit commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities[1].

In line with the functions of NPA, defined in Section 11 of the Act, the revenue generated from NPA's services is utilised inter alia to:

- Provide and arrange for road and rail access within ports;
- Regulate and control port access (navigation within port limits; enhancement of safety and security);
- Provide and arrange for tugs, pilot boats, and other services and facilities for the navigation and berthing of vessels in the ports; and
- Provide, control and maintain vessel traffic services.

The NPA's Tariff Book sets out the various tariffs that are charged by the NPA to maintain and develop the South African port system. The current approach to the setting of tariffs requires, as a starting point, a determination of the total amount of revenue required to fulfil the functions listed above, including the provision of future infrastructure, followed by a determination of how the total revenue gets apportioned to the individual tariffs for specific services and facilities. Determination of the total revenue is based on the tariff methodology which has been approved and fixed until 2017/18. This strategy deals with how the total revenue gets apportioned to the individual tariffs.

Tariff Methodology *vs* Tariff Strategy

It is important to note the interrelationship between the tariff methodology and the tariff strategy. The annual calculation of NPA revenue and the resultant average tariff change is done in line with the multi-year tariff methodology (set to be reviewed for the 2018/19

[1] *Directive 23(2).*

tariff year) that sets out the application of the Required Revenue and Return on Assets methodology in the South African port system. The methodology determines the total amount of revenue the NPA may raise through port tariffs, whilst the tariff strategy only determines who is charged for what portion of the total revenue in the port system. The Regulator is aware that if all charges are passed on fully, the cargo owner (the consumer) will indirectly pay for all port related costs. Despite this, the benefit of having a more accurate cost allocation is through the resultant more accurate investment decisions (based on correct revenue flows) and the efficiency gains there from.

The tariff strategy will not result in any significant reduction in total port costs (except for the possibility of foreign shipping lines absorbing some of the costs). Any future reduction in total port costs may only come from the impact of the tariff methodology.

Government Objectives

The Tariff Strategy is aligned to government objectives with regard to economic growth and employment creation. The Tariff Strategy aims to create a fair, transparent and cost-reflective port pricing structure which will allow for port infrastructure investment to take place, creating employment and boosting trade. In line with the Industrial Policy Action Plan 2014/15–2016/17 that states, *"Both government and business have recognised the role of appropriate infrastructure as a driver of economic growth in South Africa, and called for the cost of doing business to be reduced in order to enhance the competitiveness of the country's goods and services. In this regard, government has identified the crucial role that SOCs play in achieving the strategic objectives of job creation, reducing the cost of doing business, poverty alleviation and positioning SA as the investment destination of choice in Africa."* The Tariff Strategy includes mechanisms for subsidies required for the public interest .

Converted crane at the Port of Port Elizabeth.

In addition, The State of the Nation Address (2015) spoke of a "nine point plan". Points 3 (Advancing beneficiation), 5 (Encouraging private sector participation) and 9 (Operation Phakisa and growing the ocean economy and other sectors) are of particular relevance to this Strategy. These and other government objectives, some of which are listed below, have been considered in the drafting of the Strategy.

The National Development Plan:

The National Development Plan (NDP) aims to achieve the following major goals by 2030:

- Eliminate income poverty – reduce the proportion of households with a monthly income below R419 per person (in 2009 prices) from 39 percent to zero; and
- Reduce inequality – the Gini coefficient should fall from 0.69 to 0.6.

The enabling milestones which are relevant for the Tariff Strategy are:

- Increase employment from 13 million in 2010 to 24 million in 2030;
- Raise per capita income from R50 000 in 2010 to R120 000 by 2030;
- Establish a competitive base of infrastructure, human resources and regulatory frameworks;

- Gross Domestic Product (GDP) should increase by 2.7 times in real terms, requiring average annual GDP of 5.4 percent over the period. GDP per capita should increase from about from about R50 000 per person in 2010 to R110 000 per person in 2030 in constant prices;

- Broaden ownership of assets to historically disadvantaged groups;

- Exports (as measured in volume terms) should grow by 6 percent a year to 2030 with non-traditional exports growing by 10 percent a year;

- The level of gross fixed capital formation should rise from 17 percent to 30 percent, with public sector fixed investment rising to 10 percent of GDP by 2030; and

- Durban port capacity should increase from 3 million containers a year to 20 million by 2040.

The Mid-Term Strategic Framework (MTSF):

The MTSF defines the strategy up to 2019 for the implementation of the National Development Plan. The following objectives are taken from Outcome 6: Infrastructure:

- Where state-owned enterprises are unable to meet demand for freight services, the State should vigorously encourage private-sector involvement. The Act, which facilitates concession agreements and licensing in Sections 56 and 57 respectively, needs to be used to enable more private sector involvement, with pro-active management of tariff implications;

- Optimal utilisation of assets for example Port of Ngqura's modern deep-water facilities make it attractive for container transhipment traffic;

- Enhance the performance of sea-ports and inland terminals, including initiatives in the National Infrastructure Plan; and

- Public investment as a percentage of GDP is 10% by 2019.

National Commercial Ports Policy:

- The basic principles of the National Ports Policy are as follows:

- National needs, aspirations and requirements shall be of primary consideration;

- Consideration of user and other stakeholder needs and views need to be embedded in all processes;

- Port system development, management and enhancement will primarily remain a national function;

- Regulation should be kept to a minimum, without compromising national aspirations, safety, health, security, efficiency and environmental sustainability;

- Participants in the market should be treated equally and fairly; and

- The principle of user pays or cost recovery, benchmarked against international best practice to ensure that the costs are globally competitive, will be applied as far as possible, including an appropriate return for infrastructure providers.

Situational Analysis

The situational analysis describes the current state of port pricing in South Africa.

Overview of Problems within the Current Tariff Book

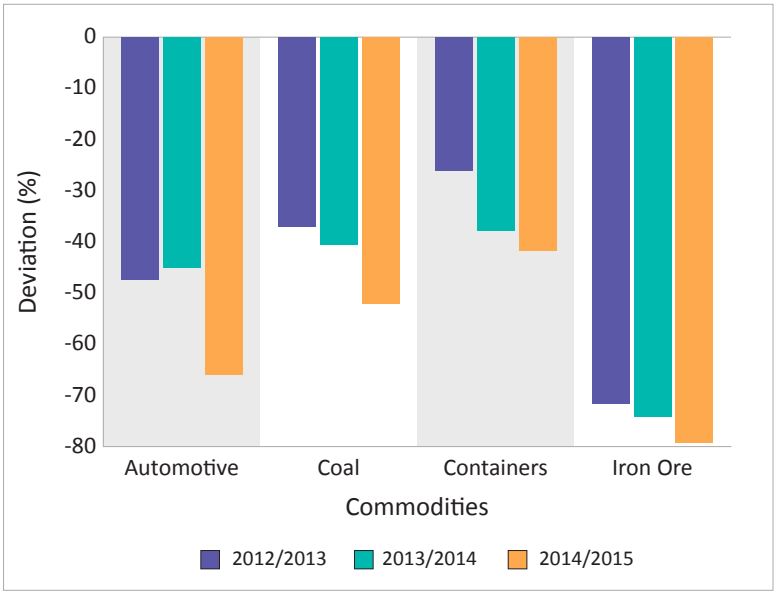
Determination of the individual tariffs has been based on historically differentiated tariff lines, which is problematic in several ways as identified by the NPA:

- Lack of a clear set of principles and rules to be applied in determining the individual tariffs for the various services and facilities, especially where deviating from a baseline tariff;
- Lack of clarity and transparency regarding all operating costs, expenses and revenues incurred or generated from a specific service, facility or land, as well as the value of the capital stock related to such services, facilities or land;
- Lack of explanation for differential tariffs for different commodities using the same handling classification;
- Lack of information 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; and
- Lack of information on how the tariff structure promotes access to ports and efficient and effective management and operation of ports.

For the previous three years, the Ports Regulator has conducted a Global Port Pricing Comparator Study (GPPCS) which seeks to benchmark South African port prices against its global peers. The results are indicative of the situation described above. The results show that the overall structure of the South African port pricing system has changed somewhat on a relative level; however, despite large decreases in container cargo and export automotive dues announced in the 2013/14 Record of Decision as well as relative changes in marine services and dry bulk commodities in the following year, the imbalances remain.

New straddle carriers assembled in Durban for the port.

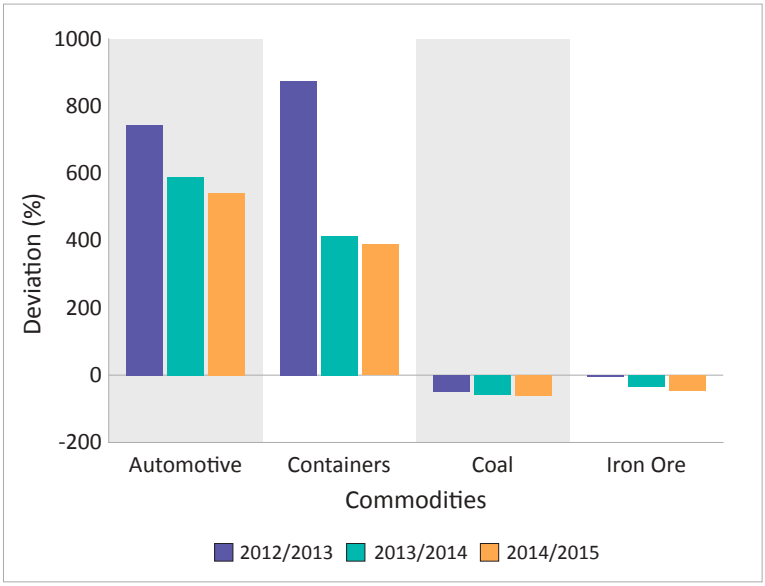
Figure 1: **Vessel Costs**



Source: Ports Regulator (2015). The full report is available at: www.portsregulator.org

As evident in figures 1 and 2, the results show that significant implied cross-subsidisation from cargo owners towards primary exporters and vessel owners persist. Although this has improved over the period the study has been conducted, cargo owners still face a 388% premium in 2014/15, although down from a premium of 874% to the global sample average in 2012/13. While vessel owners face costs below the global sample average (-26% in 2012/13, -32% in 2013/14 and -42% in 2014/15), the total NPA costs to users in container ports still comes at a high premium of 125% above the global sample average (similar results for the automotive sector apply) whilst the report shows that bulk commodities are charged much lower total port costs than the global sample averages. This further implies that beneficiated exports from South Africa are facing much higher costs than their global peers as compared to exporters of un-beneficiated bulk commodities, whose tariffs are below the global sample used in the study.

Figure 2: **Cargo Owner Costs as compared to global sample**



Source: Ports Regulator (2015). The full report is available at: www.portsregulator.org

It should be noted that the GPPCS is not an input into the Tariff Strategy but provides a monitoring tool for the strategy. It is useful to know that the Tariff Strategy results are very well aligned to international norms.

Observation on Tariff Imbalances

As a result of these issues, the current tariff structure presents several imbalances in the determination of the various tariffs, including:

- 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 most services (clearly evident in Figure 1);
- Relatively low and unevenly distributed levels of revenue from the real estate business based on the asset value and benefits derived from being in the port system.

This strategy attempts to address these imbalances by moving away from value-based assessment towards an infrastructure-based charge, resulting in more efficient pricing which is in the public interest. Through the asset and cost allocation process and the resulting tariff structure, a quantitative assessment of the cross-subsidies is possible and existing cross-subsidies and their magnitude can be calculated. The table below examines potential cross-subsidies from decades of historical pricing levels and indicates the approach that the strategy takes to attempt to address these.

Table 1: **Potential Cross-Subsidy & Tariff Strategy Approach**

Potential Cross-Subsidies Arising from Historical Pricing	Tariff Strategy Approach
Cargo owners are subsidising other user groups such as vessel owners, and tenants.	A new asset allocation that results in an infrastructure cost reflective tariff proportional to the benefit each user group derives from the infrastructure or service provision. See sections 2 and 3.
Container and automotive cargo owners pay more than dry bulk cargo owners on a global comparator basis.	Similarly, infrastructure is costed according to benefit derived from each cargo handling type – this is calculated by weighting total revenue required from cargo owners using the number of vessel calls by cargo type divided by total volume to get a per unit cost. See section 4.
It is still to be determined whether lessees are being subsidised (i.e. paying less than market value for their land) and whether some lessees are subsidising others (i.e. paying unequal or unfair tariffs).	The Regulator will start to actively monitor rental prices to ensure that two pieces of land with similar characteristics are not being charged radically different rentals. Furthermore, the Regulator will endeavour to determine the market value of port land as part of its asset valuation exercise. See section 4.

/continued on the next page

Potential Cross-Subsidy & Tariff Strategy Approach	
Potential Cross-Subsidies Arising from Historical Pricing	**Tariff Strategy Approach**
Port users of a particular port subsidising users in other ports, through a system wide tariff book approach.	System-wide pricing will remain in order to reduce the risk placed on any single port user; however, the tariff book is to be rebalanced and direct user charges in certain instances may be introduced. See section 2.
Port users subsidise fledgling port-related industries and other national policy initiatives/government objectives.	Discounting certain infrastructure for identified port users in order to achieve national objectives of economic growth and inclusion will remain. See section 5.
Use of port revenue/profits for non port purposes.	This is outside the scope of the tariff strategy.
Port users of the same category or user group paying lower tariffs than similar users through differentiated tariffs or discount structures.	All discount structures are to be removed from the tariff book. Tariff rationalisation will result in a gradual move towards consolidated tariffs that will include the removal of any discount structure currently in place. Certain built-in incentives and discounts will remain, mainly related to coastwise shipping and transhipment etc. See section 5.

The above are generalised statements; exceptions may persist. However, the Regulator is committed to understanding and unravelling any other cross-subsidies which prevent efficient pricing in the port system and welcomes the views of port stakeholders in this regard.

Approach

The NPA submitted a Pricing Strategy to the Regulator in 2012 which was aimed at addressing imbalances arising from an inefficient pricing system. This Pricing Strategy included a Beneficiation Promotion Programme (BPP) for export of beneficiated goods in an effort to support government key objectives of industrialisation and job creation. This document responds to the Pricing Strategy submitted in 2012 and enhances and underpins it through a public engagement process.

In this regard, the Regulator adopts a phased approach in the development the tariff strategy. The phased approach can be outlined as follows:

- Phase 1: GPPCS assists to determine a benchmark for marine charges and cargo dues, differentiated by cargo type.
- Phase 2 (Projects 2–4): The development and publication of the principles and characteristics of the tariff book that sets out the policy foundation that any tariff change in future must adhere to, including the Asset Allocation, tariff structure reviews, a consolidation of tariff lines on tariff and port level as well, as review of marine service pricing methodology.
- Phase 3 (Projects 5–7): Regulatory accounts and valuation methodology, regulatory design implications and the development of the beneficiation and promotion strategy.
- Concurrent: Stakeholder engagement is present after each phase. Determining and finalising a phased implementation approach/plan will occur during phases 2 and 3.

Figure 3:
The Tariff Strategy Process

Phase 1 has been completed for 2012, 2013 and 2014. The Global Port Pricing Comparator Study (GPPCS) is published on the Regulator's website and has previously been presented at a series of road shows. In the absence of a Pricing Strategy, the GPPCS placed South Africa in a global context and supported the view that port price reforms were necessary and also pointed towards the broad direction of change for port user categories in the Tariff Book. This was further supported by NPA's own port pricing sample presented in the proposed tariff strategy, which showed significantly higher cargo dues in South Africa. In future years, the purpose of the report will be to act as a monitoring tool to measure the progress and impact of the tariff reform process.

The GPPCS was not, however, an input into the Tariff Strategy. The Tariff Strategy costed infrastructure according to an asset allocation that was completely independent of the GPPCS trends. The fact that the resultant direction of change required by the Tariff Strategy matched the direction of change suggested by the GPPCS only serves to prove that South Africa is moving towards international best practice with regard to infrastructure pricing.

This document represents phase 2 of the tariff strategy process.

Phase 3 will be completed in the 2015/16 year after comment and consensus is obtained through consultation with port stakeholders over this document. Accordingly, this document was published for public comment for a period of two months with comments due on the 31st of May 2015.

Consultation

NPA submitted a proposal for a new tariff structure in 2012/13 and this was presented in a series of roadshows hosted by the Regulator in March 2013. Further, there was a comment period for both the Strategy and the Methodology. These comments and questions from the roadshows were taken into consideration when drafting the Regulator's response and can be found on the Regulator's website. In June 2013, the Regulator held a focus group and received comprehensive submissions from South African and international port pricing experts. The process was put on hold for a year while the multi- year Tariff Methodology was finalised and was renewed again in 2014 when, armed with all submissions, the Regulator drafted a response to NPA's proposal. The draft was published on the 31st March 2015 and a comment period of two months was allowed. During this time the Regulator had several meetings by request from various associations such as the Fruit Growers Association and the South African Freight Forwarders Association. The Regulator, furthermore, held two focus groups, one with government officials and one with port experts, which were well attended. Nine written submissions were received from government departments and a well represented pool of port user associations. In June 2015, the Regulator hosted its second roadshow on the Tariff Strategy and extended the period for written comments by an extra month. Questions and answers from the Roadshows have been documented and further submissions were received from port users.

Table 2: **Consultation undertaken by the Regulator**

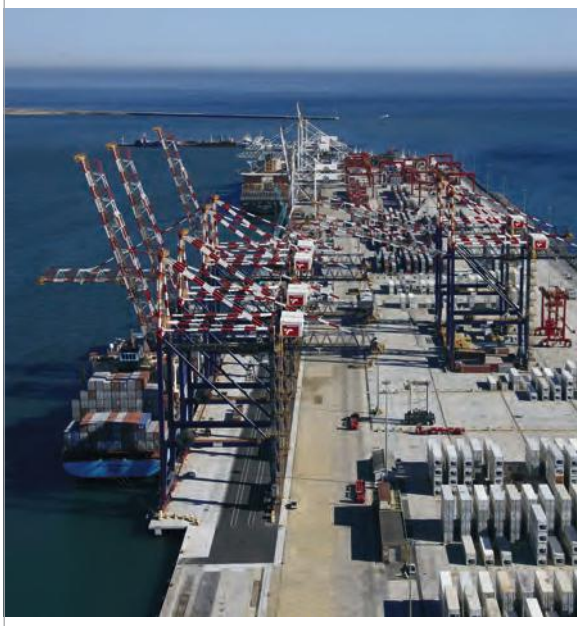
Date	Consultation
March 2013	NPA's proposed Tariff Strategy presented at Roadshows.
June 2013	Focus group and submissions received from local and international port pricing experts.
April/May 2015	Draft Tariff Strategy published 31 March 2015 • Written comment period of two months; • Focus group held with government officials; • Focus group held with port experts; and • Meetings on request with various port user associations.
June 2015	• Comment period extended by a further month; and • Roadshows held in Durban, Johannesburg, Port Elizabeth and Cape Town.

This final version of the Tariff Strategy takes into account all written submissions from government departments and port users, documented comments from roadshows, submissions from port experts and discussions held. While this strategy is final, the implementation thereof will be consulted together with the proposed tariff application each year.

Report Structure

The report structure follows the process that was undertaken in order to complete phase 2 and is as follows:

- **Section 1:** Introduction;
- **Section 2:** Guiding principles – outlines the methodology underpinning the tariff structure;
- **Section 3:** Asset allocation – based on the methodology, assets are allocated to port users;
- **Section 4:** Individual tariff lines for marine and cargo dues are reviewed;
- **Section 5:** Rules for deviating from the guiding principles are given;
- **Section 6:** Conclusion and Implementation.



Port of Cape Town.

Guiding Principles for setting the base tariff

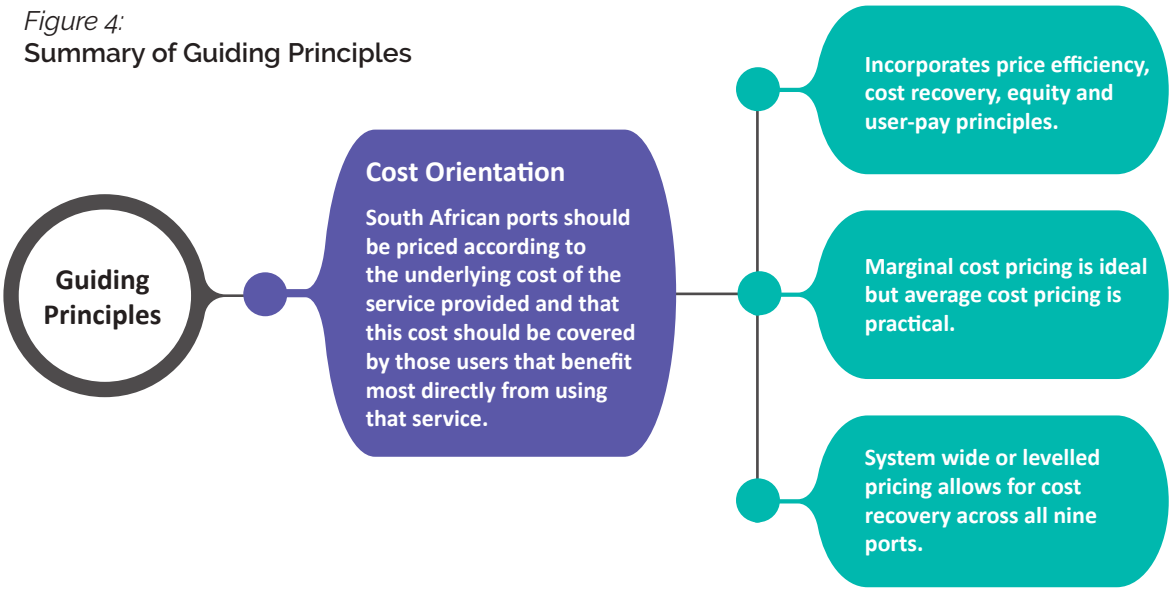
In developing the guiding principles for setting the base tariff, the Regulator considered the following requirements:

- **Cost causation** – The purpose of this factor would be to provide port users with the correct pricing signals when utilising port facilities. This ensures that port users will only demand services or utilisation of port facilities when value placed on them is as large as the resources availing/providing them. On the other hand the pricing signals must also reflect the correct capital structure and influence the correct behavioural changes, promoting efficiency and productivity in the port system.
- **Cost minimisation** – The use of a cost recovery revenue model, where operational costs have a direct impact on average tariff levels, requires strong incentives to minimise costs.
- **Distribution of benefits** – Costs are recovered from the direct user since it is equitable and reasonable that costs be recovered from the beneficiary of that service. The complex nature of port activities requires some trade-offs in the way pricing is conducted. E.g. using Gross Tonnage (GT) as a pricing variable sends a different signal to liners than using vessel calls. The discussion on port dues and marine services will expand on this topic.
- **Practicality** – The Tariff Strategy should be practical and relatively easy to implement but this should not steer away appropriate cost recovery.

Based on the above requirements, guiding principles for setting the base tariff are outlined in the diagram and sections that follow. These guiding principles aim to introduce a more flexible approach of facilitating pricing in the ports sector to what has been proposed earlier in order to establish an appropriate level of tariffs that better reflects the underlying costs. These principles are aimed at enforcing transparency and certainty.

The principles are meant to bring real benefits to customers through charging cost reflective tariffs. On that basis, those customer categories currently over-charged would see tariffs reduced, whereas those categories that are currently subsidised (under-charged) would see their tariffs re based to a fair level. These principles must be taken into consideration during the gradual adjustment of the tariff book over the period up to and beyond 2026/27.

Figure 4:
Summary of Guiding Principles



Cost Orientation

The principle of cost orientation is a hybrid of price efficiency, cost recovery, equity and user-pay principles. It refers to the fact that South African ports should be priced according to the underlying cost of the service provided and that this cost should be covered by those users that benefit most directly from using that service. The principle of cost orientation is important as it prevents unfair pricing and protects consumers' interests.

In the port sector, the unbalanced pricing structure is inefficient as the 'higher than cost' pricing depresses economic activity of some port users whilst subsidising those of others. This can further be expanded into the principle of setting tariffs in accordance with the costs incurred, whilst deriving a reasonable return from setting those rates in order to ensure the long-term development and upgrade of existing infrastructure. Port prices should at all times seek to promote efficient outcomes in port, port-ancillary and broader transport markets where a general and quite powerful presumption supports the proposition that efficient prices are those that are related to the underlying costs of providing and continuing to provide the relevant port functions/ services.

In line with the approach adopted by the National Development Plan the full cost of providing services should be recovered from users as far as possible and services provided to an identifiable group or user must be recouped from that user or group, where cross-subsidies are in the public interest. The main rationale for the user pay principle is not to raise revenue, but rather to establish more efficient allocation of resources in the port system.

Average Cost Pricing

If charges are well designed, users will be willing to pay for a service in line with the marginal cost of providing that service. However, determining the marginal cost is not a simple exercise in the port industry. As a result, where cost recovery principles are enforced, average costing is commonly used. Though the NPA may not be participating in a competitive environment, it is still expected to render competitive services and prices. From a theoretical point of view, efficiency requires marginal cost pricing. Intra-annual price changes or customer differentiation to reflect differences in marginal costs can enhance efficiency. A marginal cost pricing mechanism may signal the value that consumers attribute to further capacity expansions as the port system approaches its capacity limit and marginal cost rises. Therefore, as a basic rule, an ideal tariff structure must see marginal costing incorporated wherever possible as a price baseline, and prices must be based on some notion of cost as opposed to an approach that includes sentiments of 'what the market will bear'.

It is, however, a very difficult exercise to estimate and distribute medium and long term marginal costs, especially early on in a tariff strategy review process. The Regulator is aware that marginal costing works best under an assumption of competition and if volumes are short, other sources of income are required. Furthermore, pure marginal cost pricing may not be feasible while respecting a revenue requirement model because marginal costs may be higher or lower than average costs. In addition, marginal costing will generally, in cases where fixed costs are significantly large,[2] result in price levels far below average cost pricing and as such will require outside funding for capital expansion.

As such, utilising marginal cost pricing may not be feasible over the short to medium term and might be difficult to reconcile with a revenue requirement methodology. For this reason, average cost pricing will be used. Due to the difficulty in allocation of common costs, the pricing (and the full allocation to different users) thereof must, in principle, be at least equal to the average total cost of the service determined through the current use of the required revenue approach. In terms of the allocations to specific users and tariff lines, it means direct costs plus an appropriate proportion of common and overhead costs. However, in determining the correct asset allocation and attributing costs to different user categories and cargo types, the unit throughput by user (cargo type, tenant, or vessel) will then result in an average cost approximation. This is similar to the current calculation, but will change with a different asset (cost) allocation, effectively resulting in a more accurate costing of the service based on asset allocations. Operational costs will be allocated as per user group (effectively by cost centre in the case of marine services) and asset allocation (weighted to user groups by asset value when not directly attributable).

[2] *See Roy, 2002, Schuler 2009 and others.*

The disadvantage of using average cost pricing is that it does not take efficiency into account which is particularly important in the pricing of port infrastructure. The most common ways of combining efficiency and revenue requirements are through the use of two-part tariffs, adjusting the fixed charge to meet the revenue requirement, or through second-best pricing like Ramsey pricing[3]. However, through the inclusion of the Terminal Operator Performance Standards (TOPS) and Marine Operator Performance Standards (MOPS) process in the Tariff Methodology, the concerns around efficiencies and the incentives for higher efficiencies throughout the ports system can be addressed. This is being addressed currently as part of a separate process being conducted by the Regulator and will be included in the methodology when the required level of confidence is reached.

System-wide Pricing

Average costing will be applied across the ports system in order to reduce the burden placed on any single port user and to ensure equality in benefit. Whilst pricing should ideally be determined on a facility level, to ensure equality in benefit across the geographical distribution of the South African port system as well as to ensure the spreading of funding risk, average cost pricing will be implemented across the system. This will apply to the different user groups and result in system-wide pricing within the different cargo handling types. This type of system-wide pricing is common in the pricing environment where homogenous services are required (e.g. the provision of electricity and fixed-line telecommunications) and has been adopted here. The impact of this principle will result in, for example, equal cargo dues for a ton of dry bulk irrespective of the port being used. Similarly, each unique marine service will be priced equally, although differentiation due to variables such as time or distance might apply in the calculation of the final fee.

System wide pricing in the context of a developing country is also useful in that it allows the sharing of the costs of development of a new port or terminal/facility between all users rather than only the users of that particular port or terminal/facility i.e. a single tariff book approach to system wide pricing. However, the existence of significantly different levels of service in a system might require differentiation between 'project internalised user charges' and system wide user charges. As such, the Regulator reserves the right to apply direct user charges where it deems necessary, especially in instances where significantly different levels of service or cost base exist.

Asset allocation between users

The purpose of allocating different asset groups to user groups in the port system is to provide a set of investment signals both to the NPA and service providers based on the flow of revenue. It is important that the investment signals reflect the underlying asset structure to facilitate the correct flow of investment allocation, clearly in the public interest. The allocation or attribution of the cost of port assets takes into consideration which user classes depend more on a particular asset type and the extent to which they would be affected if the infrastructure did not exist. Therefore, in considering where

[3] It is not evident whether the best scheme is a two-part tariff or some other pricing mechanism. The role of block rate pricing, increasingly more frequent in actual pricing practices, is yet to be fully investigated.

the burden of this asset class allocation should be, the Regulator also looked at the activities of the different users and the benefit they derive there from. The lack of a methodology to allocate benefit or use in a more precise manner necessarily results in an approximation or general allocation. Any proposal or development of a more precise methodology will be taken into consideration going forward as cost reflectivity is the ultimate objective of the Tariff Strategy.

The facilities and services provided by the port can be divided into the following:

- **Seaward side** – lighthouse service infrastructure, port control and safety, entrance channel, breakwaters, turning basins, aids to navigation, vessel traffic services, maintenance dredging;
- **Landward side** – quay walls, roads, rail lines, buildings, fencing, port security, lighting, bulk services; and
- **Sea-land interface** – at the point where land and sea meet, quay and berth facilities are provided for both ships and cargo.

The Regulator has categorised port users as follows:

- Shipping Lines;
- Cargo Owners;
- Terminal operators (and all cargo working lessees); and
- All other lessees in the port system.

The general underlying logic is that the seaward side benefits mostly shipping lines and cargo owners, while the interface benefits mostly shipping lines and tenants, and the landward side benefits mostly tenants.

Table 3 identifies the key port assets and allocates these assets to user groups in order to determine a more equitable share of infrastructure and cost sharing between the broad groups.

Celebratory spraying of water at the Port of Durban.

Table 3: **Asset Allocation**

Port User Asset Class	Lessees	Terminal Operator	Cargo Owners	Shipping Lines
Breakwaters	33% shared on a NBV basis		33%	33%
Channels, Fairways, Basins			50%	50%
Quay walls, Berths, Jetties		50%		50%
All ship working vessels and aids to navigation				100%
Vessel repair infrastructure	40%	15%	15%	30%
All movable NPA assets, buildings and structures (not part of lease agreements) and unused land	50% shared on a NBV basis		25%	25%
Terminal land and staging areas		100%		
Non-Terminal land including recreational and yachting	100%			
All common access infrastructure	66% shared on a NBV basis		33%	
Overheads	50% shared on a NBV basis		25%	25%

** NBV: Net Base Value*

Breakwaters

Breakwaters are defined as structures that are built into the sea to protect the port. Breakwaters by definition protect the port system as a whole and make the establishment of a port facility feasible by removing the effect of waves and protecting the port and its main function as a cargo working facility from bad weather. Furthermore, it is more difficult to determine relative use of the asset between port users than it is for channels (shipping line) or land (lessee), for example. As such, the Regulator determined that all cargo working users, i.e. liners, cargo owners themselves, and cargo working lessees should carry the costs of building and maintaining the breakwaters in equal shares. It is important to note that the shared component for tenants is based on the NBV of the land.

For the purpose of recovering the cost of the breakwaters through marine services gross tonnage will be used. The use of vessel size as a pricing variable provides a more accurate approximation of asset use.

Channels, Fairways, basins

All navigable channels in the ports are used by liners to facilitate the transfer of cargo from the open seas to terminals. An equal distribution of the cost and maintenance of the assets must be shared by cargo owners and shipping lines equally as this represents a more equitable attribution of costs in terms of both benefit and use. For the purpose of recovering the cost of the channels, fairways and basins through marine service costs gross tonnage will be used as vessel size is a more efficient approximation of asset use than, say, an average cost based on vessel calls. Cargo will be levied on an average unit basis through cargo dues.

Quay walls, berths and jetties

Quay walls, berths and jetties are the connecting points between the land and watersides of the port. It makes the transfer of cargo possible and facilitates both the functions of the terminal operator as well as the shipping lines. These assets are attributed on equal terms to shipping lines and terminal operators. The cost recovery that forms part of the shipping line costs will be levied through marine service costs and recovered on a gross tonnage basis; the use of infrastructure is more efficiently priced based on the size of the vessel. Larger vessels make more use of available draft, weight of equipment on quays and possible damage to infrastructure. Cost to terminal operators will be on an NBV basis.

All ship working vessels and aids to navigation

All ship working vessels and aids to navigation (including lighthouses) are allocated to shipping lines who directly benefit from these services to safely navigate the port system. These tariffs will be recovered through Port dues, Vessel Traffic Services (VTS) charges, and existing light dues and based on GRT.

Vessel repair infrastructure

According to benefit, the direct charge or cost of current infrastructure should be recovered on a 50% basis from the users of the facility, i.e. the tenant as well as the shipping lines. However, the Regulator proposes to spread the cost between all users across the port system in line with Government initiatives, especially Operation Phakisa as the Regulator agrees that currently the provision of infrastructure of this nature is rarely financially viable; it also represents a critical service

required in a world-class port system and, as such, should be carried across the port system by all users. Lessees of existing infrastructure, combined with shipping lines, should contribute the bulk of the infrastructure, with other port users, namely non-cargo working lessees, and cargo owners contribute to a lesser extent. This will be reviewed in light of operation Phakisa and future funding models that may impact the financial viability of these projects and may see projects funded by the private sector, funded in total by the lessees.

All movable NPA assets, buildings and structures (not part of lease agreements) and unused land

All movable assets and unused land costs are shared equally between user groups. The Regulator, as part of the tariff methodology and the tariff determination process, will determine the extent of inclusion in the Regulatory Asset Base of unused land.

All cargo working land and related assets (Terminals) and their staging areas

All cargo working land (commercial leases) and related assets must be recovered from the lease holders of these facilities.

All non-cargo working land and related assets (Non-Terminals) including recreational and yachting

Similarly, all non-cargo working land and related assets must be recovered from the lease holders of these facilities.

All common access infrastructure

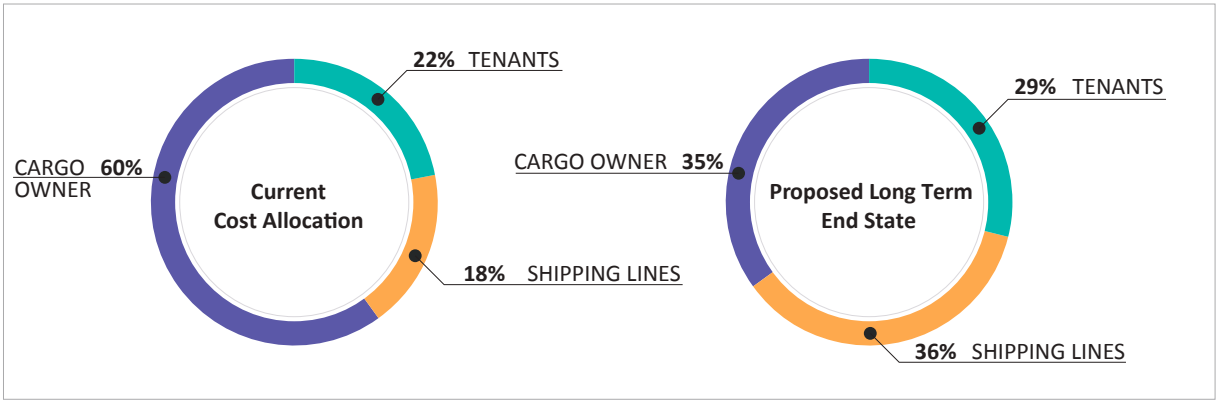
As with wet common infrastructure, where the allocation is to the users of the infrastructure and cargo owners as the beneficiary thereof, similarly, dry common access infrastructure (including Port Engineering) is allocated to the users of these assets (lessees) as well as the beneficiaries thereof, namely cargo owners.

Overheads – Including Opex and other costs in line with the regulatory framework

All overhead costs are shared equally between user groups.

The pie charts reflect a summation of the proposed asset allocation to user groups.

Figure 5: **Current Cost Allocation *vs* Proposed Long Term Cost Allocation End State**

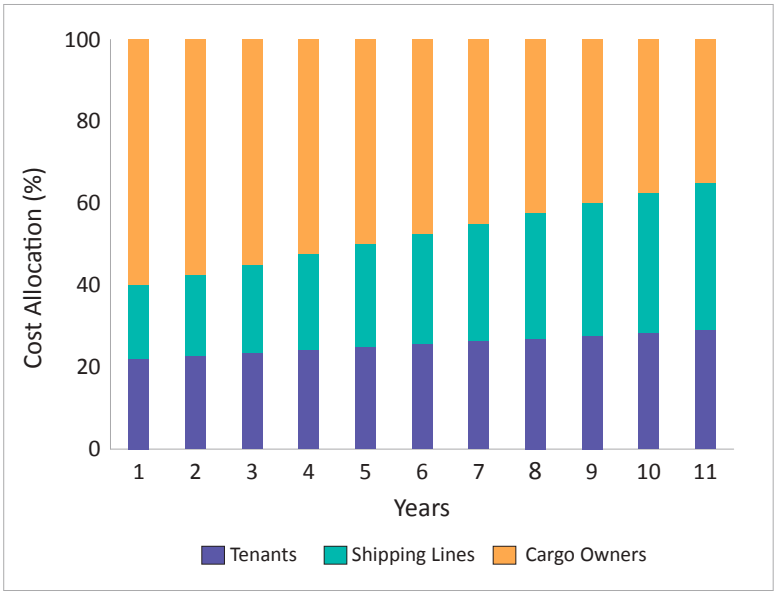


The revised allocation results in a provisional redistribution of costs between user groups as follows:

- Cargo owners decrease in cost share from 61% to 35%;
- Shipping lines increase in cost share from 17% to 36%; and
- Terminal operators' and other tenants' leases increase from 22% to 29%;

On a broad level, the gradual shift from the current allocation to a more equitable shift in cost allocation will be spread over a proposed period of ten years or more.

Figure 6: **Gradual Shift in Cost Allocation**



The implementation of a revised cost reflective pricing structure will be executed over a period of at least ten years for a number of reasons, which are stated below:

1. The reallocation of costs is, in essence, a 'zero-sum game'. To decrease the contribution from one user group necessitates the increase in revenue from another. The contractual agreements binding leases prevents the Regulator from changing tariffs too quickly.

2. Large shifts in tariffs may lead to unintended consequences and as such, a more gradual approach is favoured.

3. The cost structure of the port system, by its very nature, changes and evolves over time. This may be as a result of a change in consumer behaviour (domestically or internationally); the addition of cargo specific capacity resulting in a change in the cargo mix or even shifts in other cost elements. This will in any case require an annual review of the pricing structure and, in effect, change the 'end state'. The end goal remains to have a pricing structure as close to full infrastructure cost reflectivity as possible, that can then be maintained.

Figure 6 shows in broad terms the gradual shift in cost allocation. The adjustment of the contribution of user groups to required revenue is certain, given the current asset allocation. However, the yearly annual increases in tariffs for each user group are far more uncertain due to the nature of the tariff methodology. The indicative annual price change implications over the period of ten years or more and based on the current cost allocation and pricing structure are estimated based on current forecasts, as follows:

- Cargo owners as a group could experience a ***real*** **decrease in prices on an *annual* basis of approximately -5.2%**;
- Shipping lines could have to price in a ***real*** **increase on an *annual* basis of approximately 7.2%**; and
- Lease revenue in total could be required to **increase in *real* terms over the ten years by approximately 2.8% *annually***.

These are indicative numbers only (on a *ceteris paribus* basis) and will change each year as the value of the asset base changes due to new capital and revaluation of assets, as well as changes in revenue (for the purposes of this indicative example, a 5% increase in revenue and inflation is assumed on an annual basis). The review of this allocation will be published annually and reflected in the tariff determination. Successive tariff determinations by the Regulator will be differentiated annually between user groups and between cargo handling types at reasonable levels in order to reach the proposed, more rational end-state in the long term. **Due cognisance will be given by the Regulator in circumstances that present, in any one year, to ensure that large tariff spikes to any particular user group is avoided. As such the increases/decreases implied above will not be strictly applied in each year as a stipulation.**

Automated mooring units at the Port of Ngqura's Container Terminal.

Tariff rationalisation

This section reviews and illustrates the possible effects of the proposed asset allocation on cargo and marine service tariff lines. The review aims to reduce the number of tariff lines, simplifying port tariffs, and provides an improved rationale for the definition of tariffs.

Review of Tariff lines for Cargo Dues

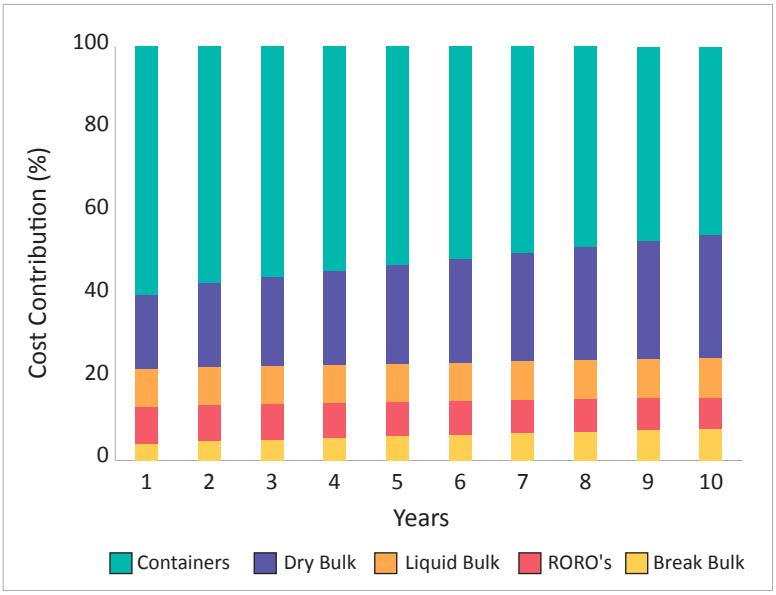
Cargo owners are required to contribute partially to breakwaters, channels, fairways and basins, vessel repair infrastructure, NPA assets not earning lease revenue and common access infrastructure. The calculated portion of the revenue requirement is therefore 35% and will be adjusted on an annual basis. The Regulator has decided to adopt a process of tariff line simplification based on cargo handling type (Dry Bulk, Break Bulk, Containers, Liquid Bulk and RORO's). The share of the different cargo handling types' contribution to the required revenue is based on vessel calls. The use of vessel calls is considered to be the most rational approach to distribute the required revenue given the significant portion of the revenue required allocation attributed to wet infrastructure. The vessel call split has been ascertained using SAP data and will be updated annually.

Cargo dues will be adjusted, together with the other revenue streams over the proposed ten year period or more. Whilst the current distribution of vessel calls is used to calculate the distribution between

cargo types, it is important to realise that any change in the mix will result in a change in the calculated cost allocation and the resulted distribution. This will be reviewed annually and the updated 'target' cargo mix will be published as part of the tariff determinations and incorporated in the tariff methodology going forward.

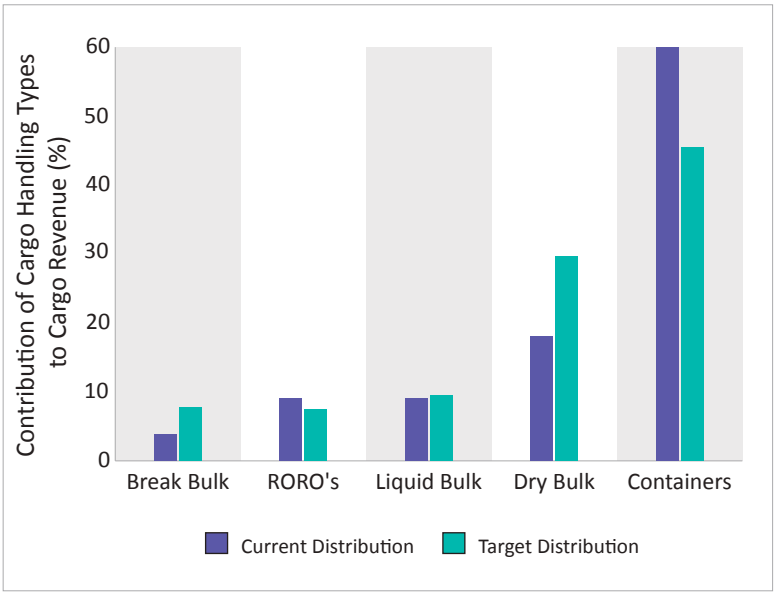
The indicative changes to each cargo handling type based on the current distribution of vessel calls are:

Figure 7: **Provisional Cargo Dues Changes**



The proposed cargo dues structure will reflect an overall decreasing cost recovery from cargo with real decreases for containers and RORO's. Some tariffs in the other categories see an increasing cost share; these will however be limited as the overall decrease in cargo dues contribution is significant.

Figure 8: **Cargo Dues Annual Changes Required**



The implementation of this will have different impacts on different commodities. The underlying assumptions guiding the base level cargo dues tariffs include:

1. The strategy proposes that a 'per unit' charge and a base rate be calculated per cargo handling unit (container, ton etc.). All tariffs will over time be adjusted to converge towards the base rate that will be adjusted every year;

2. Cargo handling type: Tariffs are calculated by cargo type and not specific tariff. Initially, specific tariffs will still remain part of the tariff book, but as convergence occurs these tariffs will disappear and the base level will apply;

3. In the absence of a finalised beneficiation promotion strategy for the South African port system, export tariffs for container and RORO's are to be maintained at a 50% discount to import tariffs so as to align as far as possible with government's current strategic objectives as regards beneficiation and export competitiveness; however, it is clear that Transnet Port Terminals (TPT) handling charges may negate the impact thereof. State designed incentives through the NPA pricing structure should not be neutralised or eroded by price increases by another government entity. Whilst this retains the status quo, more work is required in consultation with the DoT, the dti and other stakeholders with regards to South Africa's industrial policy objectives and the finalisation of the beneficiation strategy may result in a change in this regard;

4. All volume discount structures, which are subsidised by other port users who are not benefiting from the discount, are to be phased out and will be dealt with if required in terms of section 5 of the strategy. As such, the Automotive Industry Volume Discount will be removed over a maximum of 10 years but targeted over 5 years, depending on the impact of volumes and relative revenue growth in other parts of the tariff structure. We will also consider the impact on each Original Equipment Manufacturer (OEM) affected by the phasing out of the volume discount programme.

National policy aligned tariff incentives are currently retained to be further developed to better align with national industrial and transport policy objectives:

1. Empty container cargo dues will remain as such until otherwise determined;

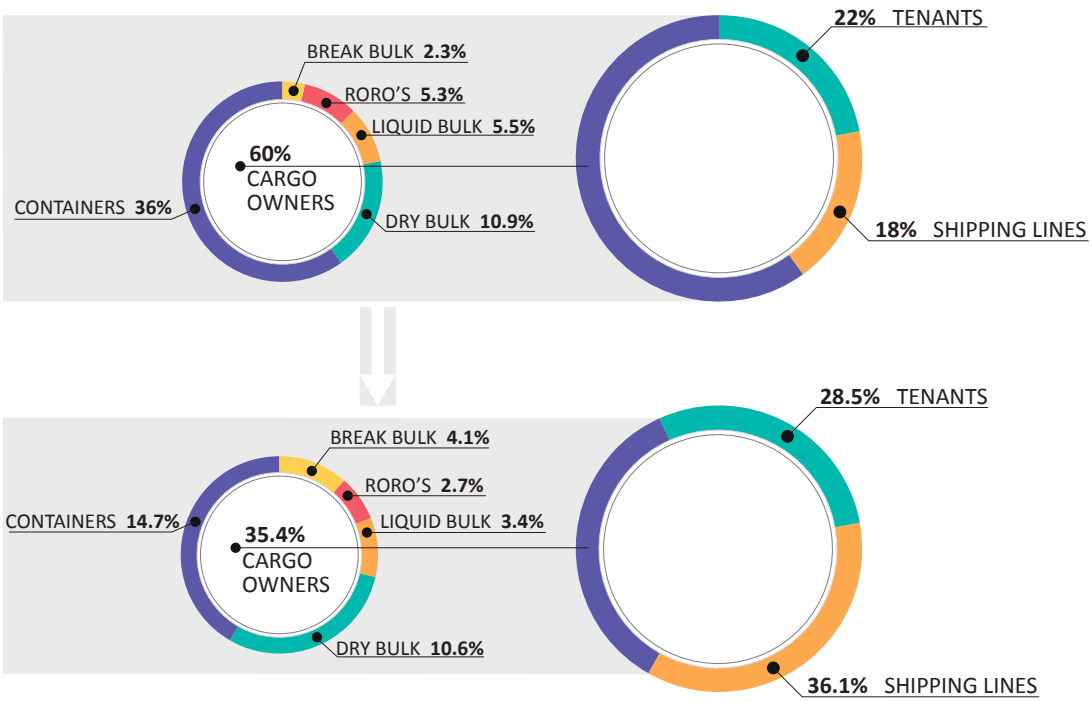
2. Transhipment cargo dues are to remain at the current levels;

3. Coastwise cargo dues are to be retained; and

4. Further discounts for the beneficiation of specific products not included at this stage, will be considered by the Regulator together with government for specific inclusion in future tariff determinations.

5. Ultimately, the total impact of the revised asset allocation, combined with the assumptions detailed above, will see significant changes in the total contribution of different cargo handling types to total NPA revenue. These are illustrated in Figure 9.

Figure 9: **Cargo Dues Contribution to Total Revenue (Current and Future Target)**



The resultant indicative base tariffs are given:

Table 4: **Indicative Cargo Dues Base Tariffs**

Base Tariffs (R) in the Proposed End State (based on 2013/14 data)		
Dry Bulk	(tons)	6.53
Break Bulk	(tons)	31.03
Liquid Bulk	(tons)	15.21
RORO	Import (Tons Equivalent)*	51.30
	Export (Tons Equivalent)*	25.65
Container (full)	Import (TEU)	651.53
	Export (TEU)	325.77

** Vehicles will be charged per unit per size category, in line with TPT's vehicle category classifications.*

Further, the establishment of a base tariff for the different cargo types will result in some tariffs requiring change at much slower rates than others. As the tariff effect will differ for the different tariffs, the specific magnitude depends on the current tariff level differential with the base level as calculated. Changes in the asset structure, volume growth and resultant revenues will affect different impacts on different tariff lines. These will be adjusted on an annual basis as convergence with the updated base rates are progressively reflected in the tariff book. As such every year the tariff book approved by the Regulator will contain an updated list of the base rates. This will allow all cargo owners to monitor the convergence of their applicable tariffs with these base rates.

Review of Tariff lines for Marine Services

Vessel owners are required to contribute partially to breakwaters, channels, fairways, basins, quay walls, berths, jetties, all ship working vessels, aids to navigation, vessel repair infrastructure, NPA assets not earning lease revenue and overheads. The calculated share of the revenue requirement is therefore 36% and will be adjusted on an annual basis. The Regulator has decided to adopt the tariff simplifications proposed by the NPA in their proposal.

Maritime services as a whole are currently not recovering operating costs, depreciation/capital and other allocated costs. This impacts the ability of maritime services to be self-sufficient for purposes of capital additions (such as new tugs) without cross-subsidisation from other services and port users. In addition, cross-subsidisation currently exists between individual maritime services as a result of some services over-recovering costs, whilst others are under-recovering costs

The proposed maritime services tariff structure works on the basis that the Required Revenue should be calculated individually for each service, applying the cost recovery and user pay principles. Each maritime service has a different cost base that is dependent on the operating and depreciation/ capital costs specific to providing that service. In addition, the assets are specifically allocated to each service (for example, tug vessels will be allocated to tug services and tariffs) to calculate the required returns for each service. Different tariffs will then be calculated for each service to meet Required Revenue on a system wide approach and ensure cost recovery at the disaggregated level.

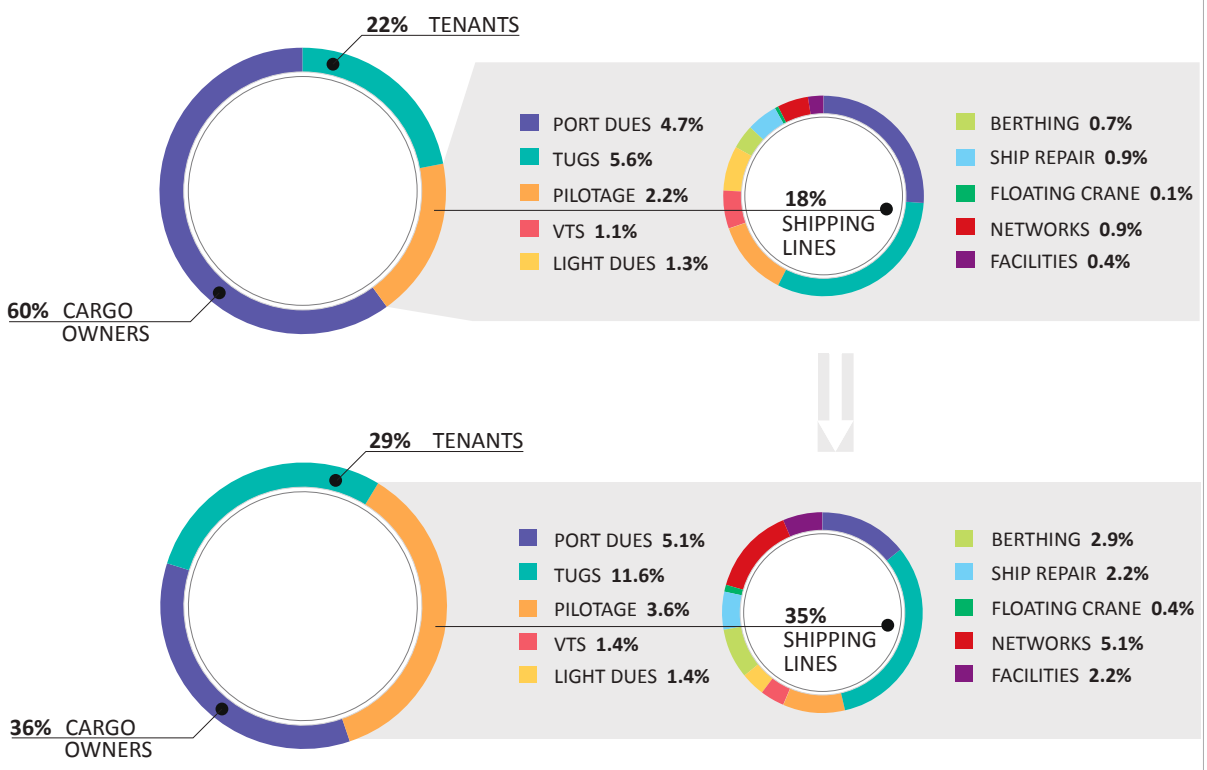
In calculating Required Revenue, as detailed above, and setting tariffs to meet Required Revenue for each individual maritime service, shipping lines will pay the correct amounts for the specific services that they use, thereby satisfying the user pays principle. Furthermore, the basis for the charges can be clearly explained.

The proposed new tariff structure suggests the discontinuation of berth dues – mainly due to three reasons: First, the initial purpose of berth dues when they were introduced was to impose a financial penalty to ensure vessels continuously work cargo while berthed. However, the tariff levels seem too low to support this objective effectively. Second, typically berth dues are charged for the provision of quay wall. Since in the proposed tariff structure quay walls are allocated to tenants, there is no longer a basis to charge berth dues to shipping lines altogether. Lastly, berth dues are a minor revenue contributor. Taking all this into account and in the spirit of simplifying the tariff book, this charge is no longer foreseen.

Table 5 highlights the marine service component of each asset type and the methodology used to calculate the applicable tariff. The strategy differentiates between the use of either gross tonnage as an approximation for vessel size as a measure of volume, and efficient use of infrastructure where a direct cost allocation is not feasible.

The revised required revenue allocation results in a significant increase in marine services' contribution over the period. This correction not only reflects a better cost allocation, but also addresses the concern regarding the global average tariffs vessel owners face. The Regulator is mindful of the impact that delays, due to port inefficiency, can have

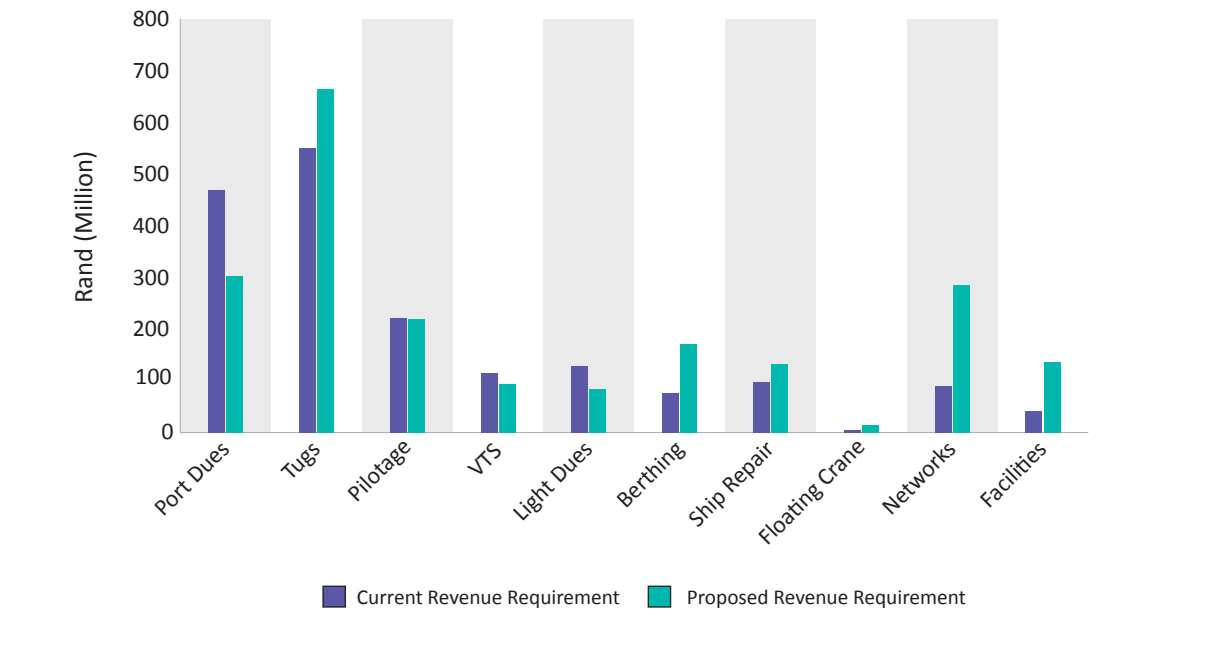
Figure 10: **Marine Service Component Cost Allocation**
(Contribution to Total Revenue: Current *vs* Targeted)



on vessel owners with regard to cost and has embarked on a process by which these inefficiencies should be addressed using TOPS and MOPS.

The recalculation of port dues, and the methodology changes proposed by the NPA and accepted by the Regulator, will see port dues increase over the period.

Figure 11: **Marine Service Cost Changes**



The inclusion of NPA overheads and associated assets and costs results in significant increases in network (electricity and water) related costs, as well as facilities (water supplied to ships, fire services, galley waste, small craft and port licences, permits and registrations) costs. Port dues however decreases significantly whilst the increases and decreases reflects a more accurate cost allocation in the pricing of marine services.

Table 5: **Marine Services Tariff Rationale**

Tariff	Tariff Base/ Design Methodology	Charge Frequency	Rationale
Port Dues	GRT per port/per hour periods/linear fee per GRT	Per visit	Incentive for quicker turnaround times
Berthing & Running of Lines	Consolidated tariff/ linear fee per GRT	Per visit	Simplification
Tugs	Flat fee per tug, irrespective of tug size/number of tugs determined by Harbour Master	Per visit as determined by Harbour Master	Incentive for latest technology vessels by moving away from fixed vessel size/tug ratio
Pilotage	Flat fee per service differentiated by port	Compulsory at every port/per visit	Simplification
VTS	GRT per port/linear fee differentiated by port	Every port where available	As per current tariff book and international practice
Light Dues	GRT per port/linear fee differentiated by port		As per current tariff book and international practice

The proposed tariff structure consolidates berth dues into the current ports dues tariff. Berth dues are currently charged on an exception basis, when vessels are not engaged in cargo handling activity, and are an insignificant revenue source for the NPA. The consolidation of the tariffs will therefore simplify the tariff structure to the benefit of users. Port dues are charged on a linear Gross Registered Tonnage (GRT) basis per port per 6 hour periods. GRT, as the measure of the total enclosed volume of the ship, is considered to be the best approximation of draught, length and width, i.e. the size of the vessel and is therefore the best reflection of use of assets such as channels and berths.

The running of vessel lines is a fairly infrequent activity during the berthing process, therefore the proposed berthing tariff design is to consolidate berthing and the running of vessel lines as a single tariff for simplification of the tariff book. The consolidated tariff will apply the same tariff design as the current berthing tariff.

Future tug charges will be driven by the actual number of tugs used and Harbour Master discretion with regards to the number of tugs needed to provide the service. The proposed tariff design for tugs will address key issues raised by customers:

- The current tariff design does not account for resources actually used, while in the future the tug charge will be driven by the exact number of tugs used per service which is more fair and easy to explain;

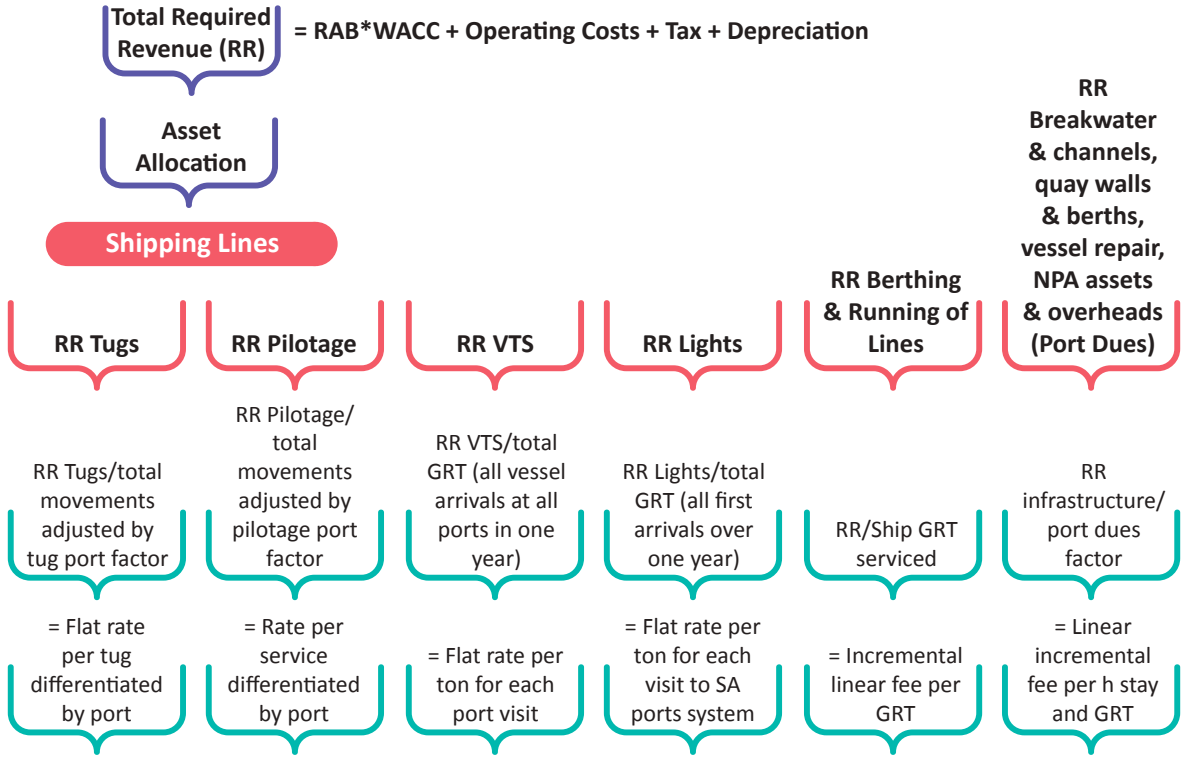
- The surcharges in the current tariff design are perceived as unfair, hence the future tariff structure will specifically charge for any additional tug used instead of a flat 50% surcharge on total tug levy; and

- Fixed GRT rate is unfair for vessels that have better manoeuvrability (e.g. car carrier vessels), hence the number of tugs used will not be based on GRT but will be at the Harbour Master's discretion based on operational and safety considerations.

The charge calculation for the proposed tariff design for pilotage will be a linear tariff that is dependent on a vessel's gross registered tonnage (GRT), rather than the current tariff that incorporates a base rate in addition to a linear rate per a vessel's GRT. This will simplify the tariff to the benefit of port users.

Applying the principle of cost recovery, in the case of tugs and pilotage, will be implemented on a system level thus the recovery of costs for tugs and pilotage will be on a system level and not necessarily for each individual port. To achieve this, all required revenues for tugs (or pilotage) from all ports will be pooled for all ports on a system level to determine a system-wide average rate per hour for one hour of tug-operation (or pilotage). This average hourly rate will be differentiated between ports in its application due to the difference in time it takes to perform the service. In other words, the applied costing factor per tug per operating hour will be the same across ports; however, since tugs will be charged per service and the time needed to provide the service differs across ports, the actual tariff will vary by port.

Figure 12:
Marine Charges Methodology



The current tariff design for VTS is fair and in line with international norms and will therefore remain the same as it adequately reflects the relative risk posed to the port system. Figure 12 captures the methodology used for each marine services tariff line.

Review of Rentals

Tenants are separated into cargo working tenants (including terminal operators) and non-cargo working tenants. Cargo working tenants are responsible for contributing partially towards the required revenue from breakwaters, quay walls, berths, jetties, vessel repair infrastructure, movable NPA assets and buildings (not leased), terminal land, staging areas, all common access infrastructure and overheads. Non-cargo working tenants are responsible for contributing partially towards the required revenue from the same assets excluding those dedicated to working cargo – quay walls, berths, jetties, terminal land and staging areas. This asset allocation results in the increase of required revenue for rentals from 22% to 29%.

The situational analysis of NPA's rental agreements cannot be conducted at this stage due to lack of information. Therefore, the revenue to be recovered from cargo working and non-cargo working tenants cannot be distinguished. Furthermore, the indicative average annual growth in rental is difficult to establish because it is not known when leases are due for renewal and therefore when prices can be adjusted, although currently NPA administers a 9% increase annually which could be enough to achieve the increase in required revenue over the proposed period. Perhaps, most importantly, tenants should be charged equitably for the land they occupy. The Regulator will seek more transparency in this area from the NPA with the view to ensuring all tenants are paying equitably for the benefit they receive, as are cargo owners and vessel owners.

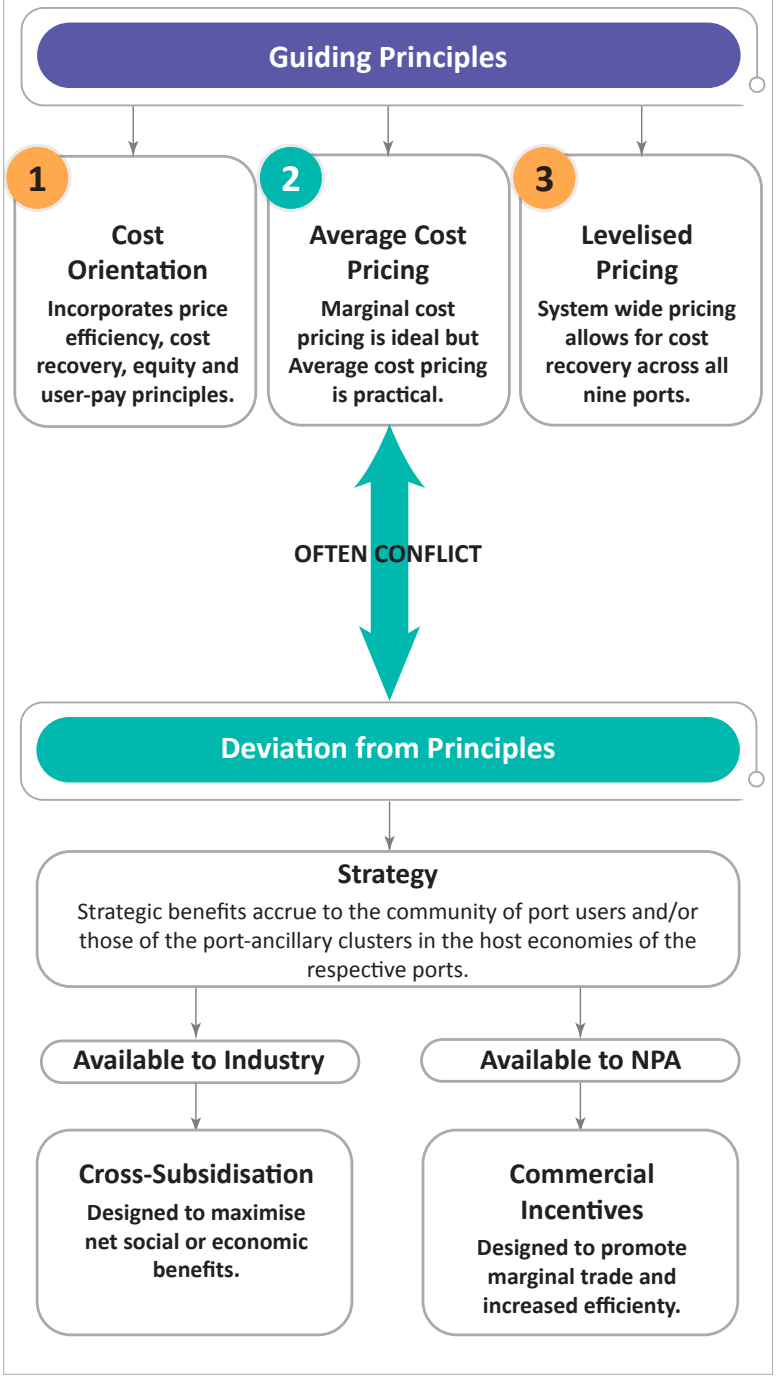
Further in response to the NPA's proposal in this regard that proposes a value based rental strategy, the Regulator will further engage with the NPA as a value based strategy does not encourage marginal cargo, contradicting the principles contained in the strategy.

Rules for Deviation from the proposed end state Base Tariff applicable to the NPA and industry

It is necessary to consider the cases where tariffs might deviate from those identified above for reasons of strategy. Overarching considerations of strategy, which may at times conflict with cost orientation concerns, are equally as important as cost orientation considerations. The Directives, in terms of section 30(3) of the National Ports Act, promotes "The avoidance of cross subsidisation save where cross subsidisation is in the public interest" (DoT, 2009)[4]. A port or port system's pricing policies should be in line with its overall strategic goals, which would include the strategic benefits that would accrue to the community of port users and/or those of the port-ancillary clusters in the host economies of the respective ports. Ports are not just a conduit for trade between sea and land; they are a vital part of a country's logistics supply chain and are, therefore, catalytic pieces of infrastructure with regard to employment creation and investment attraction[5].

[4] *Directive 23(1)(f).*
[5] *Section 11(1)(f) and Section 12 (i) of the Act.*

Figure 13:
Summary: Reasons for Deviating from Tariff Principles



Under-recovery of cost is sometimes necessary for strategic considerations but has consequences for the port system which, in South Africa, is operating within a zero-sum context. This means that if an investment or facility under-recovers, it needs to be subsidised by a different, more financially successful investment or facility, thus deviating from the main pricing principle of a cost reflective tariff. Another way of deviating from cost oriented tariffs is through discounting, which may not lead to under-recovery or cross-subsidisation, but is nonetheless a deviation from the tariff line.

Discounts and cross-subsidies are described in more detail below. Rules are given for when discounts and cross-subsidies may apply.

Cross-subsidisation

Pricing should preferably avoid cross-subsidisation between commodities or types of cargo and ports; and ultimately the tariff structure should reflect the cost structure of the port system. However, the Regulatory Tariff Methodology currently utilises the Required Revenue methodology that utilises a system wide pricing methodology. As such, equalisation of tariffs and a certain level of cross-subsidisation does exist and will continue to form part of the tariff structure. The use of specific cross-subsidies may also pose a net benefit on the port system in particular, and the economy as a whole, and, as such, must be considered by the Regulator.

A cross-subsidy (also termed as internal cross-subsidy) is a regulatory scheme basically designed to maximize net social or economic benefits. Though its practical applicability and effectiveness have demonstrated a potential for being a useful policy as well as regulatory instrument, its theoretical underpinning has remained somewhat controversial. Various kinds of definitions and concepts have been put forward as attempts to make it theoretically consistent and practically effective.

Okano (1985) has described cross-subsidy on the basis of an *un-remunerative service*. He considered cross-subsidy as the case where an un-remunerative service is dually compensated by the profit of other services. An un-remunerative service is defined as "a service, or part of a service, the resulting revenues from which are known (or definitely expected) to be insufficient to cover those costs which, but for its provision, would not have been incurred, either directly or indirectly, in the short or long run" (Ponsonby 1963). **To put it simply, un-remunerative (or under remunerated) services are not (fully) paid for but are useful services for some users.**

There have been many transportation infrastructure facilities built and/or operated under cross-subsidy schemes. Cross-subsidy is often depicted as a source of economic inefficiency on one hand, and a corrective-measure to deliver a useful service (which would otherwise have not been provided through market mechanism due to the lack of financial resources of the government and/or market failure) on the other hand. In effect, the cross-subsidy mechanism transfers a part of cost burden between projects (or assets), different elements of the same project (or assets) or between users. As a result, it has a direct impact on a project's profit level or/and user's welfare. As the implementation criteria of cross-subsidy schemes involve a considerable degree of subjective judgement, it invites an endless debate on fairness and efficiency of the scheme. It is important, therefore, to develop criteria for the South African ports system that attempts to remove the subjectivity from implementing a cross-subsidy.

Cross-subsidisation criteria

The Act sets out the functions of the Regulator in Section 30. The first listed function of the Regulator is to 'exercise economic regulation of the ports system in line with government's strategic objectives'. Cross-subsidies will first and foremost be considered when considered as part of government's national policy, or strategic objective.

Any other proposal or approval of a cross-subsidy or allowance of existing cross-subsidisation must satisfy one or several of the following criteria. The onus will be on the NPA or user group applying for the subsidy to prove that the subsidy will fall under one or more of the criteria. The PRSA recommends that a cost benefit analysis, or similar, should be conducted in order for the cross-subsidy to be considered.

Table 6: **Cross-Subsidisation Criteria**

Criteria	Description
The cross-subsidy will meet economic growth and developmental objectives	This applies to the funding of new infrastructure and the discounting of current infrastructure/services to achieve economic growth. Economic benefit needs to be weighed against expected future financial benefit. Applicable to infrastructure capacity expansion that is not 'bankable' but does provide economic benefit.
The cross-subsidy aligns national policy objectives with port pricing	The need for cross-subsidisation could arise from aligning to national policy objectives such as the Beneficiation Promotion Programme and the Automotive Industry Development Programme of the dti.
The cross-subsidy is necessary for equality in benefit	System wide pricing is an example where tariff levelising provides equality of benefit. Cargo dues, for example, are similar in all ports, providing an equal benefit of port assets to all users of port infrastructure, irrespective of their geographic location. This supports a complementary ports system.
The cross-subsidy will minimise finance and volume risk	The risks associated with the dependency on a specific user of cargo type with associated volumes advocates for a levelising of prices on at least a system wide level to minimise risk to the landlord and project.
The cross-subsidy will promote efficient use of port facilities	The promotion of efficient use of port facilities may in some cases be influenced through strategic pricing signals such as a subsidy of marine services or even cargo dues in some ports to support the use of excess capacity. This will also assist with marginal costing as the marginal cost of one unit in a port at full capacity is higher than a port with excess capacity.
The cross-subsidy will reduce congestion	Reducing congestion is a crucial part of running a successful port system and reducing logistics costs for port users. A reduction in port congestion could be considered worthy of subsidisation.
The cross-subsidy will promote the inclusion of previously disadvantaged persons	Promoting equitable access to infrastructure may require subsidisation. Marginalised groups may under recover on the cost of infrastructure or services initially but ultimately should be viable.
The cross-subsidy is aimed at reducing carbon emissions	Several global ports have started to introduce incentives or 'rewards' for vessels that are low sulphur and efficient. South African ports are more of a receiver of vessel classes than a definer of them but nonetheless sound environmental practices in all aspects of the port could warrant subsidisation.
The cost to the economy if the cross-subsidy is not granted will be drastic	Special consideration will be given where the economic risk associated with not providing the subsidy is high. This could also be called the opportunity cost. For example if the subsidy is not allowed then: • necessary capacity investment in the port will not take place resulting in an inability to meet demand; • a niche industry will fail resulting in trade and job loss; • a commodity will be priced out of the international market; and • port users will no longer use a South African port.

If industry has an argument for deviating from the cost reflective tariff that falls within these criteria then they will be required to submit an

application. The process for submitting an application for deviating from the base tariff will be developed and finalised during the 2016/17 tariff year. If a cross-subsidy is granted, it will be paid for evenly throughout the port system, i.e. by all port users.

NPA commercial incentives (discounts)

Incentives in its simplest form can be seen as a special case of discounts that serves some commercial purpose. These discounts are therefore available to the NPA in order to gain some commercial goal, without requiring any cross-subsidy from other users i.e. the discount is self-funded from retained earnings and is tariff burden neutral.

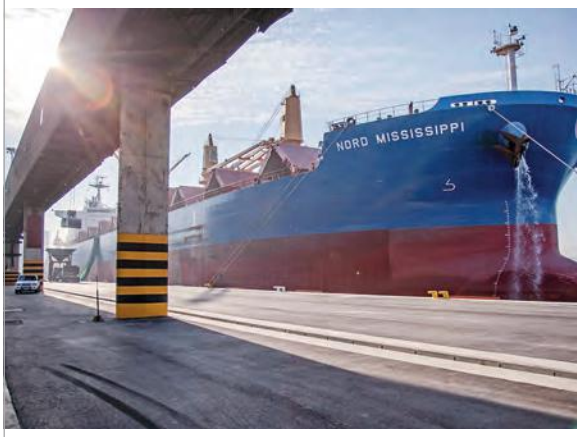
In the broadest sense, port tariffs must be trade facilitating rather than trade neutral or trade destroying. This applies to the utilisation of tariff incentives to increase cargo volumes and the number of vessel calls.

With regard to cargo volumes, this would be consistent with a situation where the tariff structure encourages marginal cargoes and attracts additional lucrative business, such as transhipment business or other transit business. In practical terms, it would therefore be an advantage if the tariff could induce vessels to work more cargo per port call. Some introduction of volume-related dimensions to certain tariff items may therefore be appealing, albeit only if applied transparently and to incentivise port users and potential port users. An example of this could be that if a certain volume of traded cargo is reached in a single vessel call or a year then the marginal cost per movement above that volume would be on a sliding scale downwards. Importantly, this is distinct from cross-subsidies because this discount does not have to be recovered either because the base number of units moved would already cover costs or because the discount would result in increased cargo which would recover the costs of the discount.

With regard to vessel calls, tariffs must attract additional vessel callers, but not at the expense of extra cargoes (through congestion etc). Most ports (in the widest sense of port communities) generate greater employment and revenue from cargo-related as opposed to vessel-related activities especially through the covering of maintenance and operation of maritime infrastructures, land transport and logistics activities, including rail and road as well as cargo services (e.g. freight forwarding and customs broking) etc. The value chain and therefore the economic multiplier effect is generally longest for imports and exports (freight vessel calls), followed by non-freight vessel calls and is shortest for transshipments. As a result, incentives should encourage increased transhipped cargo but not at the expense of increased non-freight vessel calls, which in turn should not be at the expense of freight related vessel calls. Ideally, transhipped and marginal cargo should be encouraged only when vessels are offloading or loading larger volumes of traded cargo so that the marginal cost of the transhipped cargo is minimised.

Within this same context, **tariffs should try to attract the most efficient and the least-cost vessels** to our ports, since the efficiencies that they embody will be incorporated in lower transport costs and will benefit the wider community. The most efficient vessels:

- Are modern vessels: Move and turn quickly in the port, utilise state of the art electronic communications and state-of-the-art safety and monitoring technology;



Refurbished Maydon Wharf berths 1–2 in operation at the Port of Durban.

- Have technology that allows for the efficient offloading of cargo and efficient transfer to connecting transport services;

- Are larger and carry larger volumes (with a TEU ceiling unique to each port).

A commercial incentive will result in some level of cross-subsidisation if a volume increase does not compensate for the loss in revenue from a lower price. This cannot be allowed to happen. The argument can be made that if a deviation from the set tariff results in an increase in volumes and revenue, the set tariff (before the discount) is sub-optimal. As such, the current tariff methodology will consider any discount aimed at an increase in volumes and the related risk to be carried by the NPA and not be subsidised across the system.

The Regulator will carefully consider all submissions related to discounts to determine whether said discount, aimed at an increase in volumes and the related risk, should be carried by the NPA and not subsidised across the system. The revenue risk will immediately be carried by the NPA, however, the Regulator may consider allowing some short term under or over recoveries as the situation requires but the net revenue effect should always be zero. Whilst this may not be an exact science, care must be taken to enable the NPA to use the tariff system in order to efficiently respond to market changes through price incentives, whilst ensuring the sustainability of the port system. However, discounts /incentives should be a small exception to a mainstream cost reflective pricing approach, rather than the rule.

Illustrative examples differentiating NPA commercial incentives and cross-subsidies

An example of where the risk of discounting would be carried by the NPA and not cross-subsidised is:

- Any discount that embodies a pro-efficiency dimension, like the current 15% discount on port dues that is attracted by callers with a port turnaround time of 12 hours or less. In this example the benefit of the discount is felt internally within the port system (increased calls) and is therefore recovered automatically. If it isn't recovered then it possibly should not be administered as it is not achieving its aim.

Examples of cross-subsidies:

- Passenger vessels and *bona fide* coasters where currently a 25% discount on port dues applies – here the objective is to boost the tourism industry and encourage cargo owners to choose coastwise transport over road transport – these are clear economic benefit arguments where the benefit falls outside of the port system and therefore needs to be recovered within the system through a cross-subsidy;

- Provided their port turnaround time is 48 hours or less, bunker callers currently attract a 50% discount on port dues[6]. Bunker/ transit callers constitute substantial business for the ports, most particularly the ports of Durban and Cape Town that possess refinery capacity, and for their port-ancillary business clusters. This again presents an economic benefit argument for a cross-subsidy.

[6] *Plus the additional 15% discount if they are in and out in less than 12 hours.*

Conclusion and Way Forward

Conclusion

In its proposal to the Regulator, the NPA acknowledges that the current port tariff structure is sub-optimal and presents several issues in terms of transparency, compliance, fairness and overall acceptability by port users. The new proposed tariff structure, outlined in this document, represents a clear but cautious departure from the current practice and is based on the consistent application of sound design principles, a more balanced distribution of charges to the different port user groups, as well as being more strongly aligned with international norms and standards and South African national policy objectives. Whilst the Regulator has taken a number of elements from the proposal, the overall trajectory of the tariff strategy is a more decisive adjustment towards a truly cost reflective pricing system that will greatly benefit all users, as well as the broader South African economy, in the medium to long term. The approach in developing the tariff strategy was to determine a cost-reflective asset allocation, rationalise tariff lines in accordance with the asset allocation, then criteria for deviating from those tariffs was established in special public interest cases.

Asset Allocation:

The Regulator and NPA considered principles of cost-causation, cost-minimisation, distribution of benefits, and practicality when developing the tariff strategy. Average cost pricing and system-wide pricing was seen as most practical. Assets were allocated according to which port users benefit most from the use of port infrastructure. The general underlying logic was that the seaward side benefits mostly shipping lines and cargo owners, while the connecting point benefits mostly shipping lines and tenants, and the landward side benefits mostly tenants. The resulting changes in required revenue were therefore as follows: Cargo owners decrease in cost share from 61% to 35%, shipping lines increase in cost share from 17% to 36% and Terminal operator's and other tenant's leases increase from 22% to 29%.

These changes will be implemented over a period of ten years or more. Prices will be differentiated annually between user groups and between cargo handling types at reasonable levels in order to reach the proposed, more rational end-state in the long term.

Tariff Rationalisation:

The Tariff Book currently charges cargo dues per commodity; this strategy proposes that after ten years these will be reduced to cargo handling type cargo dues only. The share of the different cargo handling types' contribution to the required revenue is based on vessel calls. The use of vessel calls is considered to be the most rational approach to distribute the required revenue given the significant portion of the revenue required allocation attributed to wet infrastructure. This results in:

- Containers cost contribution to reduce from 60% currently to 45.5% in real terms over the period;
- RORO cargo cost contribution to reduce from 9% currently to 7.5% in real terms over the period;

International cruise liner at the Port of Richards Bay.

- Break Bulk cost contribution to increase from 3.9% currently to 7.7% in real terms over the period;

- Liquid Bulk cost contribution to increase from 9.1% currently to 9.5% in real terms over the period; and

- Dry Bulk cost contribution to increase from 18% currently to 29.7% in real terms over the period.

Pending the finalisation of a beneficiation promotion component of this strategy for the South African port system, export tariffs for Containers and RORO's will be maintained at a 50% discount to import tariffs so as to align with government objectives on beneficiated products.

The proposed marine services tariff structure works on the basis that the Required Revenue should be calculated individually for each service, applying the cost recovery and user pays principles. Each maritime service has a different cost base that is dependent on the operating and depreciation/ capital costs specific to providing that service. In addition, the assets are specifically allocated to each service (for example, tug vessels will be allocated to tug services and tariffs) to calculate the required returns for each service. Different tariffs will then be calculated for each service to meet Required Revenue and ensure cost recovery at the disaggregated level.

Deviation from the base tariff:

Cross-subsidisation between user groups will be avoided as far as possible but will be allowed when it is in the public interest in accordance with the Directives to the Act[7]. Criteria have been identified under which subsidies will be granted. These are that the cross-subsidy will:

- Meet economic growth and developmental objectives;
- Align to national policy objectives with port pricing;
- Be necessary for equality in benefit;
- Minimise finance and volume risk;
- Promote efficient use of port facilities;
- Reduce congestion;
- Promote the inclusion of previously disadvantaged persons;
- Aimed at reducing carbon emissions;
- If not granted, imply a drastic cost to the economy.

Industry will have an opportunity to apply to the NPA to receive a cross-subsidy.

Similarly, volume discounts and other incentives will, as far as possible, be phased out of the tariff book with the Automotive Industry Volume Discount being removed over a maximum of 10 years but targeted over five years depending on the impact of volumes and relative revenue growth in other parts of the tariff structure. The Regulator will consider the impact on each OEM affected by the phasing out of the volume discount programme. However, the NPA can, at their discretion and with approval from the Regulator, provide incentives as long as they are self-funding (from NPA allowed returns) i.e. do not require a cross-subsidy.

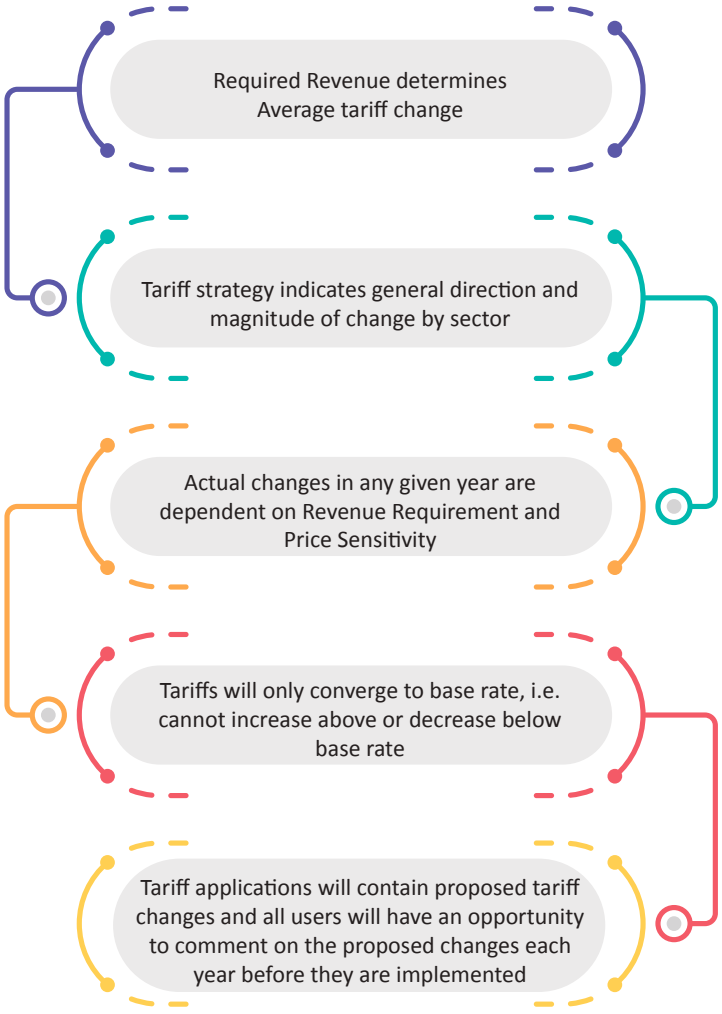
[7] *Directive 23 (1)(f).*

Implementation

The ten year (or more) implementation period with annual reviews of the variables in the tariff structure model will ensure that unintended consequences are speedily and effectively addressed and that the pricing regime stays responsive to the needs of both the landlord of the South African port system as well as its users.

The implementation of the tariff strategy cannot be cast in stone as the space available to the Regulator to implement any tariff changes depends on the application of the tariff methodology in any particular tariff year within which the Strategy takes effect. A number of considerations are part of the process and are outlined below:

Figure 14:
Steps taken each year to implement Tariff Strategy changes



Marine charges and cargo dues will be simulated during 2016/17 and implemented in 2017/18 in order to ensure the integrity of the system. As part of this process, the NPA will run a parallel invoicing system to allow the monitoring of the implementation of the revised

marine service and cargo dues methodologies. Each year, cargo dues changes will be indicated in the tariff decision similarly to how they have been for the previous 3 years. Convergence with annually published base rates may be accelerated beyond 2016/17, based on ongoing sensitivity analysis. The cargo dues base rate will be reflected as 'General Dry Bulk rate' (in the case of dry-bulk) in the tariff book, and convergence of a specific rate will see the tariff line removed and the applicable commodity will fall under the 'General Dry Bulk rate' tariff line. As such, obsolete tariff lines will be removed from the tariff book on an ongoing basis. As such, every year the tariff book approved by the Regulator will contain an updated list of the base rates. This will allow all cargo owners to monitor the convergence of their applicable tariffs with these base rates.

The Regulator is mindful of the following 'unknowns' in the strategy and dependent processes and will work to clarify them over the implementation period:

Rentals: Overall lease revenue annual increases sufficient for implementation of the strategy; however, more work within lease revenue is required to deal with the lack of transparency and information with regard to rental tariffs. The Regulator is increasing its focus in this area through its compliance monitoring programme which includes an analysis of rental agreements.

Vessel calls and sizes: The impact of vessel sizes on the calculation of cargo dues will be monitored and reviewed as required over the period. The number of vessel calls as determined through the SAP System will need to become more accurate and will be monitored closely for changes annually.

Furthermore, the linear charges per GRT for marine services will be monitored to ensure that it does not discourage large vessels, leaving infrastructure under-utilised.

Pass-on of increases: Reduction in cargo dues might not be felt by cargo owners as vessel owners could pass on charges. Transnet Port Terminals (TPT) and other terminal operators are not regulated; therefore, they could increase their tariffs or negate the effect of the import export differential. However, more stringent monitoring of terminal handling charges and freight rates will be conducted by the Regulator and the impact on the users assessed. It should be noted that reducing the tariff burden on cargo owners is not the objective of the tariff strategy – this is more directly dealt with by the tariff methodology.

Tribunal: There are tribunal decisions pending that could influence tariff lines in the tariff book – these take precedence over the tariff strategy and will be incorporated when they are published.

Operation Phakisa and divergent future funding models: The opening up of Private Sector opportunities resulting in a bigger role with regard to the funding of port infrastructure was mentioned in the State of the Nation Address (SONA) and new pricing models could emerge due to this, especially as part of Operation Phakisa. Ship repair asset allocation will be reviewed based on changing commercial viability of existing infrastructure. The tariff strategy will incorporate these emerging models for new infrastructure as they occur.

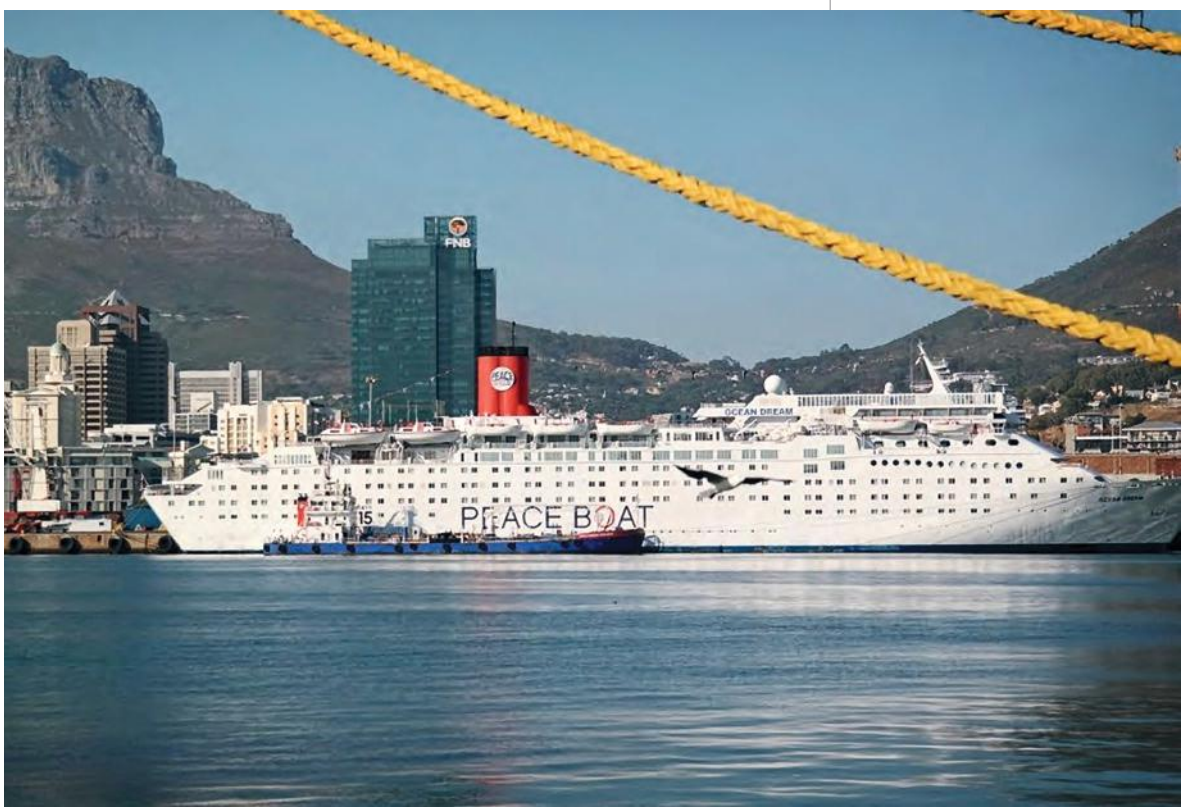
Beneficiation: A beneficiation strategy was submitted as part of the NPA's proposal but has been excluded in this strategy as it requires further research and careful consideration. This research has already started, including engagement with the dti and Department of Transport (DOT), and the Regulator hopes to have a view on this in the near future.

PCCs: The Strategy ensures that all users understand which infrastructure they are paying for and that the price they are paying is reflective of the cost of that infrastructure. This link has never been as transparent before and requires active participation of users in NPA's capital planning, through the Port Consultative Committees, in order to ensure that they have a say in the infrastructure they ultimately will be paying for. The Ports Regulator depends on these engagements when approving the infrastructure that is included in the Regulatory Asset Base.

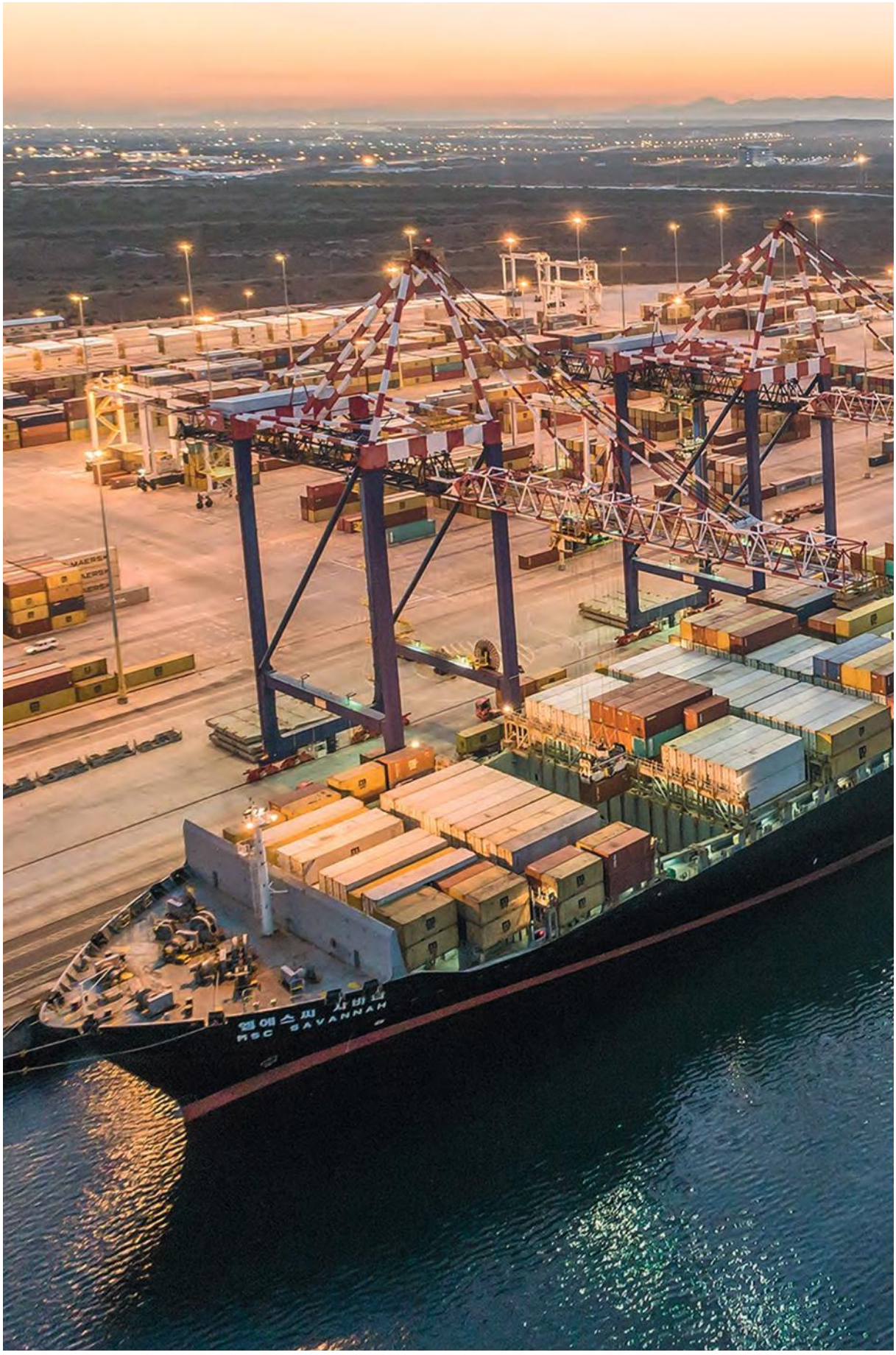
TOPS/MOPS: Furthermore, the Regulator relies on PCCs to assess the credibility of TOPS and MOPS. Further research will be conducted by the Regulator to assess the credibility of TOPS and MOPS, as the cost of infrastructure must include a performance element to be truly cost reflective.

Cross-subsidy application process: The application process for any cross-subsidy or incentive will be finalised during the 2016/17 tariff year in consultation with the NPA.

The Regulator will, throughout this process, engage with port users and the NPA alike to ensure the most equitable, fair and efficient outcome for all.



Peace Boat visits the Port of Cape Town.



Port of Ngqura welcomes the largest container vessel in July 2018.

section 3

Port Tariff Incentive Programme (PTIP) and Guidelines for Application

Published in 2017 for Implementation in 2018

The Ports Regulator of South Africa, in consultation with the National Ports Authority (NPA), the Department of Trade and Industry (the dti), the Department of Transport (DoT), and various other government departments, have developed a **Port Tariff Incentive Programme (PTIP)** in support of beneficiation, industrialisation, and localisation through port tariff regulation.

The details of the Port Tariff Incentive Programme are set out within this document.

Interested parties' / port users are hereby invited to submit their completed Application Forms to the Ports Regulator of South Africa. Application Forms should reach the Ports Regulator no later the 28th day of January, annually.

Queries and Applications should be addressed to:
Ports Regulator of South Africa,
11th Floor, The Marine Building,
22 Dorothy Nyembe Street,
Durban, 4001

Contact person: Ms. Atiyah Bhabha
Tel: 031 365 7800
E-mail: *tariffcomments@portsregulator.org*

section 3

Contents

Introduction

The Ports Regulator of South Africa (the Regulator) recognises that a country's or organisation's policy, by its very nature needs to be responsive to the broader interest of the public. The policy should be able to provide a range of incentives that bolster economic output in response to the various economic pressures a country is faced with, whilst at the same time should provide long term certainty for its dependants.

The Tariff Strategy, published in July 2015, seeks to establish cost-reflective tariffs in the SA port system over the next ten years and progressively eliminate unfair cross-subsidies. However, the Tariff Strategy does provide for the implementation of cross-subsidies, which are in the public interest, to be implemented within the tariff determination process in the Tariff Methodology.

The Tariff Strategy is aligned to government objectives with regard to economic growth and employment creation. The Strategy aims to create a fair, transparent, and cost-reflective port pricing structure which will allow port infrastructure investment to occur, and in turn create employment and boost trade.

It must be noted that cost reflective tariffs are to be the rule, and the incentives provided for are the exception to the rule. These incentives are not intended to confound the objectives of establishing cost-reflective tariffs.

The PTIP forms part of Phase Three of the Regulator's Tariff Strategy process and serves as a mechanism by which cross-subsidies within the port tariff structure may be implemented, quantified, as well as be fair and in the public interest.

The process will seek to determine what is in the public interest, as well as quantify an affordable level of cross-subsidisation within the port tariff system through various tariff incentives. The process not only allows for periodic changes and additions to the scheme, but will provide, based on the merits of each case, long term certainty regarding the level and duration of the support.

The purpose of this document is to set out guidelines regarding the process, the information requirements, the Application Form, as well as timelines.

Background

As part of the development of the Tariff Strategy and the process of correcting the anomalies and imbalances in the tariff structure, the Regulator has defined a phased approach to facilitate these processes, as illustrated in Figure 3 on page 33.

Strategy for the South African Port System published in July 2015 addresses the requirement for a set of guiding principles, appropriate asset allocation, and an approach for the simplification and review of tariff lines. This document sets out the process through which the Regulator intends on addressing the use of port tariffs in the public interest as part of an incentivisation scheme. The Tariff Strategy has provided space for such an intervention, and the formalisation of the Strategy's strategic objectives are detailed below.

The Regulator's approach to 'the use of port tariffs to support national objectives through beneficiation and specific industry support' is one of careful consideration. The various pitfalls and unintended consequences of devising and implementing a strategy that may introduce a net cost on the economy as a whole (or an unmanageable cost on the port system specifically) must be taken into account. The deviation from a cost based infrastructure charge based on use and benefit of the provided capacity within the South African port system does introduce a number of complexities that require careful consideration when a decision is made to incentivise the trade in a specific commodity or subsidy of a service above another.

It is important to note the interrelationship between the Tariff Methodology and the Tariff Strategy. The annual calculation of the National Port Authority's (NPA) revenue and the resultant average tariff change is completed in line with the Multi-Year Tariff Methodology (set to be reviewed for the 2018/19 tariff year). The Methodology sets out the application of the Required Revenue and Return on Assets model used in the South African port system. The Methodology further determines the total amount of revenue the NPA may raise through port tariffs. The Tariff Strategy however, only determines who is charged for what portion of the total revenue in the port system and establishes cost-reflective tariffs appropriately allocated to the various user categories. The Regulator is aware that if all charges are passed on fully, the cargo owner (the consumer) will indirectly have to pay for all port related costs. Despite this, the benefit of having a more accurate cost allocation is more accurate investment decisions (based on correct revenue flows) and efficiency gains.

In the absence of any specific industry support through the tariff structure, the Tariff Strategy will not result in any significant reduction in total port costs (except for the possibility of foreign shipping lines absorbing some of the costs). Any future reduction in total port costs may only come from the impact of the Tariff Methodology.

This does present an avenue for the support of national objectives through the pricing structure of port tariffs, and the 'space' for such a mechanism has been facilitated through the Pricing Strategy, however, any intervention in the tariff structure of the port system must be conducted within the primary and legislated mandate of the NPA.

In terms of Section 72(1)(a) of the National Ports Act (Act No. 12 of 2005) ("the Act"), the NPA is required, with the approval of the Regulator, to determine tariffs for services and facilities offered by themselves and on an annual basis, to publish a tariff book containing those tariffs. In addition, the Regulator, in terms of Section 30(1)(a) is required to *"exercise economic regulation of the ports system in line with governments objectives"*. The Directives in terms of Section 30(3) of the Act, which were approved on the 13th July 2009 (gazetted on the 6th of August, 2009) and amended on the 29th January, 2010, require that the Regulator, when considering the proposed tariffs for NPA, must ensure that such tariffs allow the NPA to:

- Recover its investment in owning, managing, controlling and administering ports and its investment in port services and facilities;
- Recover its costs in maintaining, operating, managing, controlling and administering ports and its costs in providing port services and facilities; and

Early days in the development of the Port of Ngqura.

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

In line with the functions of NPA, defined in Section 11 of the Act, the revenue generated from NPA's services is utilised *inter alia* to:

- Provide and arrange for road and rail access within ports;
- Regulate and control port access (navigation within port limits; enhancement of safety and security);
- Provide and arrange for tugs, pilot boats, and other services and facilities for the navigation and berthing of vessels in the ports; and
- Provide, control and maintain vessel traffic services.

The NPA's tariff book sets out the various tariffs that are charged in order to maintain and develop the South African port system. The current approach to the setting of tariffs requires as a starting point, a determination of the total amount of revenue required to fulfil the functions listed above, including the provision of future infrastructure, followed by a determination of how the total revenue gets apportioned to the individual tariffs for specific services and facilities. Determination of the total revenue is based on the applicable Tariff Methodology for the financial year. The published Tariff Strategy deals with the manner in which total revenue gets apportioned to the individual tariffs and does provide space for some level of incentivisation through port tariffs[1].

However, in keeping within the primary mandate of the NPA, a trade-off becomes apparent: Without the injection of external funding into the ports system, all costs must be carried by users of the port system. In other words, any subsidy (whether through a lower tariff or preferential service level) will result in increased costs for other port users.

The current Tariff Strategy has included a number of export promoting incentives that are already 'priced in', with the 50% import/export differentiation on full containers and vehicle imports and exports the most prominent. These have been included in support of the established policy and strategic objectives of the National Government upon which future incentivisation and industry support must be based on.

The Tariff Strategy is aligned to government objectives with regard to economic growth and employment creation. The Strategy aims to create a fair, transparent, and cost-reflective port pricing structure which will allow port infrastructure investment to occur, and in turn create employment and boost trade. In line with the **Industrial Policy Action Plan 2014/15–2016/17** that states, *"Both government and business have recognised the role of appropriate infrastructure as a driver of economic growth in South Africa, and called for the cost of doing business to be reduced in order to enhance the competitiveness of the country's goods and services. In this regard, government has identified the crucial role that SOCs play in achieving the strategic objectives of job creation, reducing the cost of doing business, poverty alleviation and positioning SA as the investment destination of choice in Africa."* The

[1] *See Ports Regulator of South Africa 'Tariff Strategy for the South African Ports System 2015/16'*

Tariff Strategy includes mechanisms for subsidies that best serve the interest of the public.

The State of the Nation Address (2015) spoke of a "nine-point plan". Point Three (Advancing Beneficiation), Point Five (Encouraging private sector participation) and Point Nine (Operation Phakisa and growing the ocean economy and other sectors) are of particular relevance to this Strategy. In addition, Outcome Four of the twelve agreed Key Performance Outcomes aimed at 'Decent Employment through Inclusive Growth' must take central spot in the assessment of whether a policy objective or regulatory intervention is beneficial to economic growth. Specifically, the creation of decent employment opportunities is an outcome of most, if not all of government's initiatives. Outcome Four focuses on *"the fundamental outputs that would need to be achieved in the current administration period, to promote employment creation and increase the number of decent jobs, stimulate inclusive growth and further diversify the economy towards more employment generating and higher value added activities".* These, and other government objectives, some of which are listed below, have been considered in the drafting of the Strategy and must for part of the Regulator's assessment when considering any incentive implemented through regulatory intervention.

Ore carrier at the Port of Saldanha Bay.

The National Development Plan:

The National Development Plan (NDP) aims to achieve the following major goals by 2030:

- Eliminate income poverty – Reduce the proportion of households with a monthly income below R419 per person (in 2009 prices) from 39% to 0%; and
- Reduce inequality – The Gini Coefficient should fall from 0.69 to 0.6.

The enabling milestones which are relevant for the Tariff Strategy are:

- Increase employment from 13 million in 2010 to 24 million in 2030;
- Raise per capita income from R 50 000 in 2010 to R 120 000 by 2030;
- Establish a competitive base of infrastructure, human resources and regulatory frameworks;
- Gross Domestic Product (GDP) should increase by 2.7 times in real terms, requiring average annual GDP growth of 5.4% over the period. GDP per capita should increase from about from about R50 000 per person in 2010 to R 110 000 per person in 2030 in constant prices;
- Broaden ownership of assets to historically disadvantaged groups;
- Exports (as measured in volume terms) should grow by 6% a year to 2030 with non-traditional exports growing by 10% a year;
- The level of gross fixed capital formation should rise from 17% to 30%, with public sector fixed investment rising to 10% of GDP by 2030; and

- Durban port capacity should increase from 3 million containers a year to 20 million by 2040.

The Medium-Term Strategic Framework (MTSF):

The MTSF defines the strategy up to 2019 for the implementation of the National Development Plan. The following objectives are taken from Outcome Six: Infrastructure:

- Where state-owned enterprises are unable to meet demand for freight services, the State should vigorously encourage private-sector involvement. The Act, which facilitates concession agreements and licensing in Sections 56 and 57 respectively, needs to be used to enable more private sector involvement, with pro-active management of tariff implications;

- Optimal utilisation of assets for example Port of Ngqura's modern deep-water facilities make it attractive for container transhipment traffic;

- Enhance the performance of sea-ports and inland terminals, including initiatives in the National Infrastructure Plan; and

- Public investment as a percentage of GDP is 10% by 2019.

National Commercial Ports Policy:

- The basic principles of the National Ports Policy are as follows:

- National needs, aspirations and requirements shall be of primary consideration;

- Consideration of user and other stakeholder needs and views need to be embedded in all processes;

- Port system development, management and enhancement will primarily remain a national function;

- Regulation should be kept to a minimum, without compromising national aspirations, safety, health, security, efficiency and environmental sustainability;

- Participants in the market should be treated equally and fairly; and

- The principle of user pays or cost recovery, benchmarked against international best practice to ensure that the costs are globally competitive, will be applied as far as possible, including an appropriate return for infrastructure providers.

Comprehensive Maritime Transport Policy (CMTP)

The strategic objectives of the CMTP are:

- To develop and grow South Africa to be an international Maritime Centre (IMC) in Africa serving its maritime transport customers in particular and world trade in general.

- To contribute in Government's efforts of ensuring the competitiveness of South Africa's international trade by providing customer focussed maritime transport infrastructure and services through an innovative, safe, secured, reliable, effective, profitable

and integrated maritime supply chain, infrastructure and systems including safety of navigation;

- To promote the growth and broadened participation of local entrepreneurs in the shipping industry and marine manufacturing and related services while through incentives and continuous improvement in ship registration vigorously promote the increase of ships under the South African flag registry;
- To promote marine transport; manufacturing and related services;
- To provide guidance to the maritime transport sector stakeholders and customers with regard to institutional arrangements, governance and regulatory interventions while ensuring effective and efficient co-ordination across Government on matters of common interest to the growth of the maritime transport sector; and
- To provide a clear framework around which operators, customers, investors and funders can freely participate in maritime transport market to improve growth, performance and competitiveness of the total maritime transport sector.
- Establish where feasible a sustainable funding and financing mechanism and or facility for the growth of the broader maritime transport sector to facilitate infrastructure development and possible acquisition of ships and equipment necessary to meet the needs of customers in particular and the South African economy in general.
- To create and enhance viable and sustainable opportunities for historically disadvantaged entrepreneurs especially, women and youth to participate in maritime transport initiatives.
- To ensure efficient and effective regulation and clear separation between maritime operations and maritime regulation and these to be a reflected in the institutional and governance frameworks.
- From an economic development perspective, create a conducive climate for South African perishable goods businesses to take part in the global perishable products market either as producers or as consumers.
- Develop modalities for the creation of a national shipping carrier to serve the SA's economic and trade interests.
- Develop and maintain a competitive ship registration system.

A number of the principles and strategic objectives contained in both the CMTP and the Commercial Ports Policy finds firm footing in the implementation of the PTIP. These policies will be taken into consideration as part of the assessment process and should be considered when preparing an application.

Implementing the PTIP does take place in the context of an imbalanced tariff book and the determination of the individual tariffs has been based on historically differentiated tariff lines, which is problematic in several ways including the:

Jack-up oil rig at the Port of Saldanha Bay.

- Lack of a clear set of principles and rules to be applied in determining the individual tariffs for the various services and facilities, especially where deviating from a baseline tariff;

- Lack of clarity and transparency regarding all operating costs, expenses and revenues incurred or generated from a specific service, facility or land, as well as the value of the capital stock related to such services, facilities or land;

- Lack of explanation for differential tariffs for different commodities using the same handling classification;

- Lack of information 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; and

- Lack of information on how the tariff structure promotes access to ports and efficient and effective management and operation of ports.

This context will see the PTIP act as a catalyst in some instances serving to accelerate the corrections needed in the tariff book. In particular, as most of these concerns will be addressed through the implementation of the Tariff Strategy over the next ten-year period, it provides for, but does not fully address the use of port tariffs as an incentivisation tool for industrial development objectives. This addition (PTIP) to the Strategy and the wider regulatory framework for the economic regulation of the South African port system, serves to formalise the process through which the use of the port tariff structure and Tariff Strategy can be utilised to form part of the wider strategic incentive program of the South African government. In essence, the Regulatory Support process is a means for partial deviation from the proposed Tariff Strategy base rates.

Port Tariff Incentive Programme

The PTIP was initiated by the Regulator in 2016 as part of the Port Tariff Strategy, of which beneficiation forms part of Phase Three. The process is intended to serve as a mechanism by which beneficiation, in the form of cross-subsidies (which are in the interest of the public) may be introduced into the port tariff system.

The Programme is open to all port users, organisations, industry bodies and industry representatives. The PTIP affords users an opportunity to apply for a discounted tariff as per the official tariff book of the National Ports Authority. The discount will not however be afforded to a single organisation / industry player, rather the discount will be afforded to the entire industry in the form of an amendment to a line item within the tariff book.

Due to the nature of the port tariff structure in terms of its user-pay principle basis, the cost of a discount afforded to a user is effectively carried by another port user, effectively rendering it a form of cross-subsidisation. The Directives to the National Ports Act, 12 of 2005 are very specific about treatment of cross-subsidisation within the ports as per Directive 23 (1) which states *"In considering the proposed tariffs in terms of Directive 22, the Regulator must have regard to whether the proposed tariffs reflect and balance the following considerations:*

- *"A systematic tariff methodology that is applicable on a consistent and comparable basis;*

- *"Fairness;*
- *"The avoidance of discrimination save where discrimination is in the public interest;*
- *"Simplicity and transparency;*
- *"The avoidance of cross-subsidisation save where cross subsidisation is in the public interest; and*
- *"The promotion of access to ports and efficient and effective management and operations in ports."*

The Regulator has envisaged an incentivisation scheme that allows limited applications for a cross-subsidy from any applicant including industry or the public sector. It is aimed at assisting small to medium sized enterprises to enter the market as well as to aid economic growth, beneficiation, national shipping revitalisation, localisation, and industrialisation. Applicants will be required to approach the Ports Regulator of South Africa with their application for an amended tariff, the Regulator will then forward to either the Department of Trade and Industry (the dti) or the Department of Transport (DoT) (depending on the nature of the application) for their endorsement. The application will then be submitted back to the Regulator who will forward it to the NPA. The NPA's assessment, together with the application will form part of its annual Tariff Application (01 August) to the Regulator and the Regulator will, after conducting its own research, issue its Record of Decision. A more detailed approach is set out below.

Iron Ore conveyor with oil rig in the background at the Port of Saldanha Bay.

However, should the NPA wish to initiate an incentive for a particular group / body / industry, then the incentive should be submitted to the Regulator (as an annexure to the Tariff Application) with the necessary motivation and supporting documents. The NPA should seek guidance from the dti / DoT with regards to adherence and compliance with international trade agreements and multi-lateral obligations.

Cross-subsidies will be shared on a system-wide basis as in-category cross-subsidisation would significantly reduce the flexibility and quantum of the mechanism as well as long term carrying capacity or sustainability. A system wide approach will still retain the ability to focus the effects of a subsidy on certain industries / cargo types, or commodities.

In order to ensure that cross-subsidies will be the exception to the rule, the NPA will be required to propose a cross-subsidy threshold, e.g. 1% of revenue. All cross-subsidises provided within the port system should then be shared within this amount. The intention behind the threshold is to avoid a system so fraught with cross-subsidies that it goes directly against the principles of the Tariff Strategy. This, along with other information requirement criteria and hurdle rates, will be defined as per Item 5.3.

A fixed period sunset review will be attached with each subsidy introduced. At the end of said time period, the subsidy will lapse. Should the applicant wish to apply for an extension of the benefit, the applicant will be required, in the second to last year, to motivate for such extension to the dti / DoT. The verified motivation may be submitted to the Regulator, by the applicant, for consideration for the first year post initial subsidy period.

For a more comprehensive background on the process in the context of the Tariff Strategy, please refer to the Tariff Strategy which may be found on the website of the Ports Regulator: *www.portsregulator.org*

Consultation

The Port Tariff Incentive Programme has been widely consulted at both a State level and Port User level. The Programme was developed by a team comprising members from the Ports Regulator, the National Ports Authority, the Department of Trade and Industry, the Department of Transport, and the National Treasury. A proposed process was published for public comment by the Regulator in March 2017 with the final PTIP being published in December 2017.

Furthermore, the PTIP was consulted with and presented to port users and interested parties through a series of roadshows held in December 2017 at various ports across South Africa.

The Process

The Ports Tariff Incentive Programme is designed to follow a six step process, as set out below.

Step One: The Application

Any port user, stakeholder, industry body, or government entity may apply, through the PTIP, for an amendment to a tariff line. The application forms are available on the website of the Ports Regulator and the NPA. Applications are to be submitted to the Ports Regulator and may be submitted at any point during the year, however applications must be submitted by the 28th day of January of a year for consideration for the next financial year (e.g. must be submitted by 28th January 2018 for implementation in 2019/2020). The Applicant may contact the Regulator at any point regarding a status update of their application.

Applicants are required to complete the application forms with as much information and detail as is available, all financial information

Figure 1: **PTIP 6-STEP PROCESS**

STEP 1:
The Application

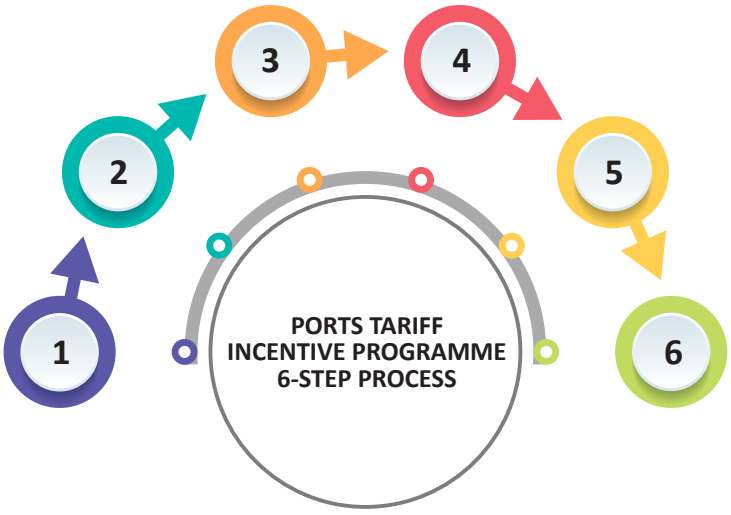
STEP 2:
Policy Endorsement

STEP 3:
NPA Analysis

STEP 4
PRSA Analysis and Decision

STEP 5:
Monitoring and Evaluation

STEP 6:
Sunset Review



will remain confidential as per the provisions of the Directives to the National Ports Act. The summary form (page one of the Application) will be published for comment along with the Tariff Application of the NPA on 01 August, however the Application in its entirety will be submitted to the relevant Department and the NPA.

The Applicant may be subjected to various analysis, visits to its premises, industry analysis, and may be requested to submit additional information.

Step Two: State Endorsement

The Application Form, as received by the Regulator will be submitted (depending on the nature of the Application) to either the Department of Trade and Industry, or the Department of Transport for their review and endorsement.

Applications concerning industrial trade would require the dti's accreditation (multi-lateral, bi-lateral, and other trade agreements (WTO), beneficiation etc.). Applications within this category will be reviewed in terms of any past or current discounts currently in place, all trade agreements in place and applicable to South Africa, National Treasury or current State beneficiation policies, objectives, and programmes as well as any past or current Competition Commission reviews.

Applications in line with maritime transport policy would require DoT accreditation (SA ships registry, coastwise shipping, economic participation etc.). Applications within this category will be assessed in terms of any enabling provision within the CMTP (as referenced by the Applicant), the alignment of the applied duration period with the Maritime Strategy's 2030 measurements and targets, as well as its relation to the promotion of national shipping revitalisation and coastal shipping (alignment with CMTP policy statements).

Should the Application satisfy the criteria as set out above, and it falls within South Africa's trade objectives and parameters etc., it will receive an **endorsement** from the department under which it was reviewed. The Application Form, as well as the endorsement / non-endorsement, and the reasons thereof will be submitted back to the Ports Regulator no later than the 25th of March of the same year.

Step Three: NPA Analysis

Application forms, together with the endorsement and comments from the dti or the DoT will be submitted, by the Regulator, to the NPA on the last day of March. This will ensure a sufficient time frame for the NPA to conduct the necessary analysis prior to its tariff application and recommendation.

The NPA will conduct the necessary financial analysis and determine the financial impact of the proposed discount on the overall port tariff system. Furthermore, a practicality analysis will determine the operational feasibility of implementing the proposed cross-subsidy.

The results of the analysis, as well as the comments of the dti, and DoT will influence the NPA's recommendation to the Regulator. The analysis must include:

- Evaluation of the impact and affordability on both a port system level and an enterprise level.

- Defining a total, annual threshold for cross-subsidy as well as other in-house criteria or minimum requirement.

- Recommendation to the Regulator on whether the subsidy should be granted, magnitude of the subsidy, as well as the subsidy period as a part of the annual tariff application.

Step Four: PRSA Analysis and Decision

The Ports Regulator will be the custodian of the PTIP in terms of process management and decision making. All applications will be submitted to the Regulator as annexures to the NPA's annual tariff application and will be published for public comment. The Regulator will conduct the necessary economic analysis, review the endorsements, recommendations, and comments as submitted by the dti, the DoT, and the NPA, and publish a final decision as part of its Tariff Record of Decision. Furthermore, the Regulator will may conduct various industry analysis, information verification, etc.

The decision will contain the details of the necessary amendments to the tariff line, the duration of the incentive, as well as the monitoring processes and guidelines to be followed.

Step Five: Monitoring and Evaluation

Monitoring and evaluation will occur for the duration of the incentive and will be unique to each incentive dependant on industry specifics, policy provisions, etc. Monitoring may take the form of the submission of reports, financials, trade data, etc.

Step Six: Sunset Review

All incentives will be subject to a sunset review, after which the incentive, the quantum thereof, and the impact will be reviewed and assessed. A decision to renew the incentive, or terminate the cross-subsidy will be taken by the Regulator after consultation with the NPA, the dti, and the DoT.

Guidelines to the Application Form

The Application Form has been developed in a manner that will allow the various reviewing parties to understand the dynamics of the applicant, as well as the relevant industry that will be affected.

A: Applicant Details

This section requires the basic information of the Applicant in terms of trade names, tax numbers, contact details etc. Should the application be submitted by an Industry Body / representative, not all information filing requirements will apply (trade data / volumes etc.), the information will be requested through the various analyses conducted by the Regulator/NPA.

B: Current Tariff Applicable

Part B requires information that is true and correct at the time of submitting the Application. The 'year' refers to the current year, at the time of applying. The 'Applicable Tariff Category' as per the official NPA Tariff Book, the 'Unit of Measurement' as reflected in the tariff book, the listed tariff as per the tariff book, and whether the tariff is an import tariff or export tariff.

C: Requested Tariff

Part C requires the Applicant to set out the details of the required, discounted tariff as well as the year in which it should be applicable. Furthermore, the Applicant is requested to set out the duration of the requested discount.

D: Product / Service Details

The Applicant is required to detail the particulars of the product or service that the discount is required for. The Applicant must attach all the necessary information (in the form of annexures) setting out the product's process in terms of production, logistics, supply chain etc. e.g.: Is the product an intermediary in a process or an end product of a process, will a tariff discount result in substantial cost-saving measures.

E: Reasons for Application

Part E requires the Applicant to state the reasons for the application. The information submitted in response to Part E will be published for comment therefore, only information that is non-confidential should be included. The Applicant is requested to detail influencing factors, as well as intended outcomes should a discounted tariff be granted. All socio-economic and job creation initiatives the applicant / industry intends on accomplishing will further motivate the discount and may be included.

Should a discounted tariff result in the accomplishment of a State objective/ international agreement, motivation should be provided herein. The includes any alignment with international trade agreements applicable to South Africa, any alignment with CMTP (include specific reference), any alignment with Operation Phakisa, etc.

F: Market/Industry Details

The details provided within Part F will assist the economic analysis and feasibility of the proposal. The incentive will not be provided to a single organisation but rather to the tariff line within the NPA's official tariff book. The Applicant is required to provide, with as much detail as possible, details of other industry players as well as information regarding an industry representative / association.

G: Trade Information

Spreadsheets have been developed in order to streamline the information submission process. Applicants are required to complete the various spreadsheets with information that has been audited, is true and correct, and may be verified. Furthermore, applicants may submit additional information as they may deem necessary to the decision making process.

The Applicant is required to set out any incentives / trade discounts / beneficiation measures currently offered by the State, or any incentives / trade discounts / beneficiation measures that may have been offered in the past fifteen years. Furthermore, the Applicant is required to set out any dealings with the Competition Commission, either currently or in the past.

Socio Economic Initiatives

The Applicant is encouraged to set out any socio-economic influences the discount will have in terms of job creation, economic growth,

Port of Maputo tug boat being refurbished at the Port of Durban's dry dock.

industry growth, trade forecasts, etc. A commitment from the Applicant is required in order for the incentive to be effectively monitored and evaluated. Question Six and Seven of Part G provides space for the Applicant to set out the manner in which historically disadvantaged will be prioritised and assisted, as well as the means by which employment will be created as well as forecasts of such. The Applicant is not limited to the Application Form and may submit all the necessary data that will further motivate the need/justification of the cross-subsidy. Furthermore, should the application fall within the sphere of maritime transport, the Applicant should set out any plans to invigorate domestic shipping and promotion of maritime transport and manufacturing.

Confidential Information

Whilst it is necessary for an Application to be published, it is understood that all financial information and volume data must remain confidential. The Applicant's name will be published, as will the details of the product / service that the discount is relevant to. Further, all socio-economic initiatives the Applicant is proposing will be published for public comment. The 'Summary' of the Application, as contained on page one of the Application Form will be published for comment.

Timelines

All applications are to be submitted to the Ports Regulator of South Africa by 28 January of any year. The Ports Regulator will manage the process and submit all received applications to either the Department of Transport or the Department of Trade and Industry by the last day of January. Officials from each department have been assigned the responsibility to review all received applications and conduct analysis as per their respective mandate. The reviewed applications, together with their recommendation / endorsement will be submitted to the Ports Regulator by 25 March of the same year.

The Ports Regulator will duly submit the received application, together with the policy endorsements / recommendation to the National Ports Regulator, no later than 31 March. The NPA will, after conducting the necessary analysis, submit the application (as well as their recommendation) as an annexure to the Tariff Application.

The Ports Regulator will publish the Tariff Application and the Executive Summary of the PTIP Application as per the tariff process. A final decision will be contained within the Record of Decision, published four months after receipt of the Tariff Application from the National Ports Authority.

Conclusion

As evident in the proposal, the Regulator recognises that policy, by its very nature can be extremely fluid at times, but at the same time provides long term certainty for its dependants. With this in mind, the Regulator has opted to balance these two requirements by defining a set process whereby the port tariff system may be utilised to support policy objectives. The process not only allows for constant change and additions to the scheme, but based on the merits of each case, provide long-term certainty regarding the level and duration of the support.

Note:
This document should be read in conjunction with the Ports Regulator's Tariff Strategy as published in July 2015 and the Port Tariff Incentive Programme as published in March 2017.

Annexure A: Definitions and Abbreviations

Applicant:
The party submitting an application as provided for purposes of initiating an investigation.

Applied Rates:
The prevailing tariff rate as contained in the latest National Ports Authority tariff book.

Coastal Shipping:

- Any navigational service carried out in a port in the Republic to serve a ship and a port facility or any navigational service carried out for logistics support of a ship and a port facility in the sea in the activities of prospecting and mining of minerals and hydrocarbons; or

- The carriage of cargo by a ship from one place in the Republic above the sea to any other place in the Republic, either directly or through a place outside the Republic and includes the carriage of cargo in relation to the exploration, exploitation or transportation of the mineral or non-living natural resources of the Republic, whether in or under the sea, provided that this shall not apply to cargo which is consigned on a through bill of lading to or from a port outside the Republic and is unloaded at a port within the Republic for transhipment purposes only; or

- The towage of any ship from or to any port or point in the sea.

- The carriage of fee paying passengers by a ship from any place in the Republic either directly or through a place outside the Republic to the same place or to any other place in the Republic without any call at any port outside the Republic, other than as an in-transit or emergency call;

- The carriage of a passenger other than a fee paying passenger by a ship from any place in the Republic to any place above or under the sea, or from any place above the sea to the same place or to any other place above or under the sea where the carriage of the passengers is in relation to the exploration, exploitation or transportation of the mineral or non-living natural resources in or under sea; and (f) any ocean research activity in the sea using a ship.

- Any ship related service provided to an installation.

Coastwise traffic and coasting ships:
Defined in the Customs and Excise Act 91 of 1964 as amended.

Commission:
In terms of the maritime safety information system is where an institution or person makes a mistake (negligence) that causes damage or loss. The accountability remains with the coastal State.

Aerial view of a section of Maydon Wharf.

Competent Authority:
Any person or organisation that has the legally delegated or invested authority, capacity, or power to perform a designated function.

Comprehensive Maritime Transport Policy:
CMTP / that component of national policy relating to all forms of transport by sea (waterborne transport) including inland waterways and intermodal links (including inland ports) of the state. It covers all types of infrastructure to support movements of goods and people; off-shore industries and is concerned with creating the conditions for a safe, secure and stable environment within which all national maritime assets can develop and be utilised for the socio-economic growth and prosperity of the nation whilst being of service to international shipping and trade.

Confidential Information:
1. By nature confidential; or

2. Recognised in terms of the ITAA to be otherwise confidential. 'Information that is by nature confidential' means trade, business or industrial information that:

   (a) Belongs to a person, firm or the State,

   (b) Has a particular economic value, and

   (c) Is not generally available to or known by others, and the disclosure of which could:

   - Result in a significant adverse effect on the owner, or on the person or firm that provided the information, or

   - Give a significant competitive advantage to a competitor of the owner.

Correspondence:
Any written communication by a party submitted by hand delivery, mail, facsimile or electronically to the Commission for purposes of the investigation.

Deadlines:
The final date for submissions, responses, comments and requests and the like as envisaged by the different sections of the anti-dumping-, countervailing, safeguards, and tariff application regulations, and shall be deemed to be at 15:00 South African standard time on the deadline indicated, unless expressly otherwise indicated.

the dti:
The Department of Trade and Industry of the Republic of South Africa

DoT:
The Department of Transport of the Republic of South Africa

Domestic Industry:
Also referred to as the SACU industry. It refers to all the domestic producers (i.e. the SACU industry) of the like products, or those whose collective output of the products constitutes a major proportion of the total domestic production of those products.

Domestic Market / Sales:
It refers to the domestic market or sales in the country of origin of the allegedly dumped products i.e. the domestic market and domestic sale of the exporting country.

Evidence:
Substantiated information that is presented by an 'interested party' as proof of its statements or initial allegations.

Exchange Rates:
The price at which one currency is exchanged for another based on the prevailing supply and demand conditions in the foreign currency markets at a given time.

Ex-factory Selling Price:
Although still widely used, the term is being replaced by the International Commercial Terms ('Incoterms') 2000, Ex-Works (EXW). It refers to all the cost incurred by the seller up to the point where he places the goods at the disposal of the buyer on the seller's premises, i.e. not cleared for export and not loaded on any collecting vehicle. See Ex-works.

Export:
Bringing or sending goods, or to cause them to be brought or sent, into South Africa from a country or territory outside South Africa.

Exporter:
Any person or company who brings or sends goods, or causes them to be brought or sent, into South Africa from a country or territory outside South Africa. The Guide's reference to 'exporter' includes the overseas manufacturer of the product under investigation.

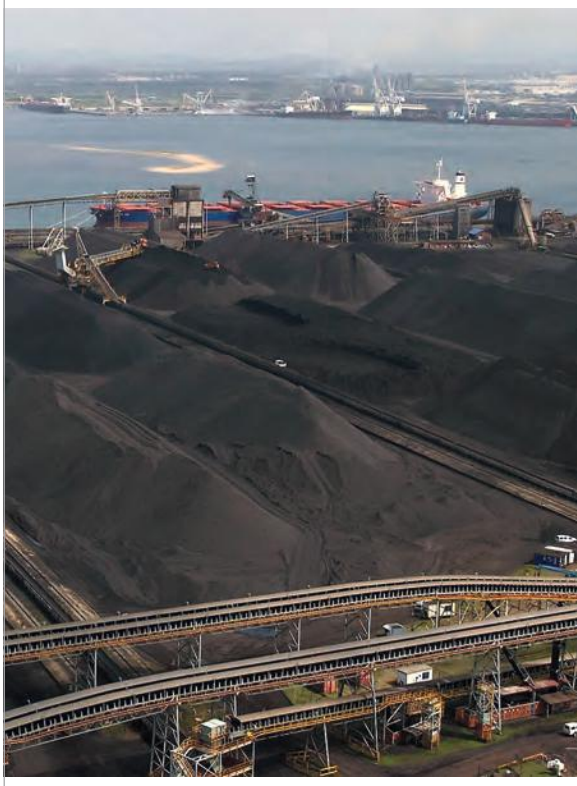
Export Price:
The price actually paid or payable for goods sold for export, net of all taxes, discounts and rebate actually granted and directly related to that sale.

Export Subsidies:
It refers to the provision by a Government of a direct subsidy to a firm or an industry, contingent upon export performance.

Ex-works:
The seller delivers when he places the goods at the disposal of the buyer, at the seller's premises or another named place not cleared for export and not loaded on any collecting vehicle. See Ex-factory Selling Price.

Facts Available:
The information that is available to ITAC at the time of making its determination, whether preliminary or final, provided that all requirements regarding non-confidentiality and timely submission have been met.

Fair Trade Remedy:
A safeguards measure is considered to be a fair trade remedy, since it is used in addressing a practice, which is not an unfair trade remedy. See Unfair Trade Remedy



Coal terminal at the Port of Richards Bay.

Filing of Information:
All case-related documents and working papers should be filed in a sequence, preferably in a chronological order, and clearly labeled with a file number and identification number, together with a detailed index to the documents.

Final Determination:
After considering comments received on the preliminary report, the Regulator will inform 'interested parties' of its final determination concerning the publication of its final report.

Free on Board:
The International Chamber of Commerce ('ICC') Incoterms 2000 defines that the seller has delivered the goods when it passes the ship's rail at the named port of shipment.

Goods:
It includes:

- All wares, articles, merchandise, animals, currency, material or objects of whatsoever nature; and, in relation to any particular goods,

- Any other goods that are reasonably capable of being substituted for them (taking into account ordinary commercial practice and geographical, technical and temporal constraints).

Industrial Policy:
Any government regulation, intervention or law that aims to encourage the ongoing operation of, or investment in, a particular industry.

Import:
Bringing goods, or causing them to be brought, from outside South Africa into South Africa.

Import Statistics:
The figures depicting the volume, value, and unit price of imported products. Also referred to as trade statistics.

Importer:
Includes any person who, at the time of importation:

- Owns the goods imported;
- Carries the risk of any goods imported;
- Represents the importer, or acts as if he is the importer or owner of any goods imported;
- Actually brings the goods into South Africa or the SACU;
- Is beneficially interested (in whatever way) in any goods imported; and
- Acts on behalf of any person referred to in the aforementioned.

Incoterms:
Refers to the ICC's International Commercial Terms and its latest revision, Incoterms 2000. The purpose of Incoterms is to provide a set of international rules for the interpretation of the most commonly used trade terms in foreign trade.

Interested Party(ies):
It includes:

- An exporter or the foreign manufacturer of the importer of a product that is subject to investigation, or a trade or business association (a majority of the members of which are manufacturers, exporters or importers of such product);
- The Government of the exporting Member; and
- A producer of the like product in the importing Member's country, or a trade and business association of the majority of the members that produce the like product in the territory of the importing Member

Levels of Trade:
Used to indicate whether the product is sold to a wholesaler, retailer, end-user, through an agent, etc.

Like Products/services:
The term 'like product (produit similaire)' is interpreted as meaning a product that is identical, i.e. is denoting alike in all respects to the product under consideration, or in the absence of such a product, another product which although not alike in all respects has characteristics closely resembling those of the product under consideration.

Also referred to as 'directly competitive product or service', which means a product that competes directly with the product under investigation.

Macro Economics:
The study of the sum total of economic activity, dealing with the issues of, amongst other, growth, inflation, and unemployment.

Material Retardation:
It occurs when imports materially hinder or retard the establishment of an industry. Such form of injury can only be allowed in instances where production has not yet started.

Micro Economics:
The study of how individuals and businesses make decisions and how these decisions affect the prices and output of goods and services.

National Ports Act:
The National Ports Act, 12 of 2005, and its associated regulations and directives.

NPA / the Authority:
National Ports authority as defined in the National Ports Act, 12 of 2005.

Non-Confidential Information:
Non-confidential information should be sufficiently detailed to permit a reasonable understanding of the substance of the information submitted in confidence.

Coal being unloaded at the Port of Richards Bay.

All correspondence submitted not clearly indicated to be confidential shall be treated by the PRSA/NPA/the dti/DoT as non-confidential.

Normal Value:

1. It means: The comparable price paid or payable in the ordinary course of trade for like goods intended for consumption in the exporting country or country of origin; or

2. In the absence of information on a price contemplated in subparagraph (i), either:

    - The constructed cost of production of the goods in the country of origin when destined for domestic consumption, plus a reasonable addition for selling, general and administrative costs and for profit; or

    - The highest comparable price of the like product when exported to an appropriate third or surrogate country, as long as that price is representative.

Ports Regulator of South Africa/PRSA:

The Ports Regulator of South Africa as established by the National Ports Act, 12 of 2005.

Public Body:

It includes a person, firm or body that acts on behalf of the Government of or another public body within a country.

Subsidy(ies):

Is deemed to exist if a benefit is conferred on products at Government expense, for a specific action being taken such as exporting.

Subsidised Exports:

Goods exported into the SACU, in respect of which the Government of or a public body within any country. Has provided:

- Any form of financial aid, or
- Any form of assistance with its production, manufacture, transportation or export, or
- Any similar assistance, or
- Has foregone any revenue that would otherwise be due to that Government or public body.

World Trade Organisation:

Came into existence on 1 January 1995 as a result of the Uruguay Round of Trade Negotiations, and has been responsible for overseeing the multilateral trading system.

section 4

Methodology for the Valuation of the National Ports Authority's Regulatory Asset Base

March 2018

Aerial view of the Port of Cape Town showing the SA Agulhas training ship.

New tug boat being floated into the Port of Durban.

section 4

Contents

Introduction

The Regulator published a draft methodology and discussion paper entitled "A Methodology for the Valuation of Port Assets" on the 23rd February 2018 for public consultation setting out the considerations in the treatment of the National Ports Authority's Regulatory Asset Base (RAB). The discussion document outlined various theoretical approaches for the establishment and treatment of an opening Regulatory Asset Base (RAB) as well as treatment of various asset classes within the RAB. The RAB is a critical element in the calculation of the Revenue Requirement and represents the value of the assets that the Authority is allowed to recover depreciation as a return of capital as well as to earn a return on capital through its tariffs. Public consultations and submission date closed on the 22nd March 2018 and a submission from the NPA was received.

Methodology

The methodology is premised on the principles of capital maintenance which presents the following approaches comprehensively discussed in the discussion paper:

- Financial Capital Maintenance (FCM) is based on the Historic Cost (HC) and Trended Original Cost (TOC) models
- Physical Capital Maintenance (PCM) is based on the Depreciated Optimised Replacement Cost (DORC) model; and
- Economic Capital Maintenance – asset values are calculated on a deprival value and Net Present Value and Deprival Value.

The Regulator concluded that the appropriate (minimum) criteria elements, as determined by the Regulator for the purpose of setting an appropriate RAB and asset valuation system must:

- Be based on a principled and sound rationale;
- Produce a reasonable asset value for existing assets;
- Result in an acceptable price-path;
- Ensure financial capital maintenance;
- Encourage efficiency and caution with respect to new investment decisions on the part of the NPA;
- Be reconcilable back to the NPA asset register, at least at a particular point in time; and
- Minimise regulatory information asymmetry problems.

The Regulator concluded that the TOC approach (Financial Capital Maintenance) based on the capitalisation dates and values in the NPA asset register best meets the criteria, however, some concerns related to the older assets capitalised before 1990 remain. Assets with capitalisation dates before 1990 will therefore be treated at historical costs. Here the assumption is that assets in existence by 1990 have been in existence for a long period of time and, for most of that time,

have been depreciated on a trajectory following the historic cost method. The Regulator therefore treats these assets on the historic cost method, while treating any assets created from 1991 onwards on the basis of the TOC approach.

The following is the approach to be implemented:

- TOC values provide a viable approach to setting the RAB and will be applied to new (post 1990 assets).
- The Regulator will differentiate between assets in existence in 1990 and those with capitalisation dates after 1990 and will treat the older assets on a Historical Cost basis.
- The Regulator will allow the NPA 60 days from publication of this methodology to correctly allocate capital maintenance applied to pre-1990 assets as appropriate in the asset register on condition of:
    - Evidence of each capital maintenance project must be provided on a case-by-case basis.
    - All relevant expenditure and adjustments to the remaining useful lives of these assets as a result of the relevant capital expenditure must be detailed and provided to the Regulator on each capital asset.
    - These capital maintenance line items must be allocated separate asset numbers and allocated to the appropriate capitalisation dates for inclusion in the asset register.
    - These assets will thereafter, if to the satisfaction of the Regulator, be considered for treatment on a TOC basis.
- On application by the NPA as part of its annual Tariff Application, the Regulator may, in considering the revenue impact of the implementation of the methodology, decide to accelerate the depreciation period of the pre-1990 assets in order to smooth out the revenue impact thereof.

RAB Rules

The RAB covers all assets employed/owned by the NPA in the provision and supply of port capacity and services. The following are the conditions that must be met in order to include an asset in the RAB. The following rules set out the criteria for inclusion and valuation of assets and treatment of maintenance on the RAB:

Prudency test applicable to new and used assets for inclusion in the RAB

The amount by which the capital base may be increased in any specific year is the amount of the actual project capital expenditure incurred in that specific year provided that:

- The amount does not exceed the amount that would be invested by a prudent landlord port owner acting efficiently in accordance with good industry practice to achieve the lowest sustainable cost of delivering the required services; and

- A least one of the following conditions is satisfied:

  a) The anticipated incremental revenue (subject to the claw-back mechanism in outer years if found to be not true) generated by the capital expenditure exceeds the investment cost;

  b) The NPA can satisfy the regulator that the new capital expenditure has system wide benefits that in the regulator's opinion justify its inclusion in the capital base; or

  c) The new capital expenditure is necessary to maintain safety and integrity in the system.

- Fixed assets must be long-term in nature and must be operationally used and useable;

- Fixed and other assets that are not in an operationally used and useable (useful) form will not be included in the RAB;

- Used and useable means that assets should be in a condition that makes it possible to supply demand for port services in the short to medium-term (within12–36 months).

- Assets will be included in the RAB and subjected to the TOC methodology as set out if the expected life of the asset exceeds 5 years.

- All assets with 5 or less years (i.e. depreciation periods of 5 years or less at the acquisition of said assets will attract straight line depreciation to be included in the tariff calculation). Maintenance on these 'short term assets' may have maintenance costs included if used beyond full depreciation.

- The NPA shall with each tariff application provide a list of temporary and long term unused assets (i.e. all assets not used operationally). This list will be published.

- In addition, all capital expenditure must be approved by formal PCC and NPCC resolutions[1].

- All capital expenditure must be submitted to the Regulator on an annual basis as part of the Annual Tariff Application for consideration by the Regulator on 01 August of every year.

Calculation of the RAB

- Working capital will be included in the RAB for the purposes of calculating the return as per the Tariff Methodology.

- The return on capital will be based on the trended original cost (TOC) value of the assets (for assets with capitalisation dates post 1990) and historical cost value for assets predating 1990 to ensure financial capital maintenance.

- A real return will be applied in the case of assets valued on a TOC basis and a nominal return will be applied to the HC asset values in the RAB.

Iron ore stacking at the Port of Saldanha Bay.

[1] This is in part to dis-incentivise the over-investment or early replacement of fully functional and usable assets.

- The net TOC value is determined by calculating the accumulated and annual depreciation on a straight line basis over the elapsed life of those assets which are depreciated (with appropriate adjustments for refurbishments etc.).

- The historic asset base as at 31st March 1990 will be used as an opening asset base (this asset base will be used as a basis to determine the current trended net value of NPA's assets). Concession funded assets and pre-payments (e.g. concessions that resulted in assets transferring back to the NPA) will be recorded on the regulatory asset base at the NPV of the actual market related rental i.e. rental will be assumed on par with the WACC return at a minimum – NPV = (Rental revenue less costs less tax)/WACC.

RAB Depreciation

- Accumulated depreciation is the cumulative straight line depreciation of regulated property, plant and equipment.

- The depreciation should be calculated on historical cost of an asset (this is independent of the amortisation of the revaluation amount) and based on the remaining useful life of each asset. See Annexure A.

- The total accumulated depreciation and accumulated amortisation is deducted from the TOC cost of the RAB to obtain the regulatory asset base on which to calculate the return. See Annexure A.

- Mothballed and/or impaired assets will not earn a return although the maintenance of mothballed assets with a definite plan for future use will be allowed in the operating expenses.

- Similarly, the maintenance on assets still in use, but fully depreciated, will be allowed in the operating expenses.

- A complete list of assets in this category must be compiled and updated on an annual basis by the NPA.

Treatment of Maintenance

- Maintenance to be treated as operational expenditure (i.e. not capitalised and included in the RAB) for purposes of tariff calculation will be defined as: 'work undertaken within the port system with the intention of:

  a) re-instating the physical condition of an asset to a specified standard (e.g. dredging to the specified depth)

  b) preventing further deterioration or failure

  c) restoring correct operation within specified parameters

  d) replacing components of assets at the end of their useful/ economic life with modern engineering equivalents

  e) making temporary repairs for immediate health, safety and security reasons

  f) assessing assets for maintenance requirements (e.g. to obtain accurate and objective knowledge of physical and operating condition, including risk and financial impact, for the purpose of maintenance).'

- Maintenance or projects that may be included in the RAB as capital expenditure when it results in the following:

  a) an increase in the asset's useful function or service capacity (e.g. dredging to a greater than specified depth).

  b) an extension of its useful life.

  c) an improvement to the quality of the service(s) delivered through utilisation of the asset (e.g. the installation of a mooring system in Ngqura).

  d) a reduction in future operating costs.

  e) the upgrade or enhancement becoming an integral part of the asset.

- Maintenance dredging must be subjected to the criteria above.

Annexure B summarises the treatment of different assets descriptions in the RAB.

Applicability of the RAB Valuation Methodology

This methodology is applicable in its approach to the valuation of the RAB and the calculation of the Required Revenue from the date of the application for the 2019/20 tariff expected on 1 August 2018 and future tariff years until reviewed or updated by the Regulator.

Any part of the current applicable Multi-Year Tariff Methodology (published March 2017) that contradicts this Valuation Methodology is hereby replaced by this Methodology.

Mr Thabadiawa Mufamadi
Chairman of the Ports Regulator of South Africa
28 March 2018

Trailing suction hopper dredger the Ilembe leaving the shipyard in Kinderdijk, Netherlands, on her maiden voyage to the Port of Durban.

Annexure A

The example below illustrates the calculation of depreciations and the TOC value (for new assets and those that postdate 1990 capitalisation dates) of the RAB is based on the following basic assumptions:

- Historical cost of R100 m.
- Inflation 5% per annum.
- Depreciation on a straight line basis over the 30-year life of asset.
- Service life of the asset is 30 years.
- No adjustment in the Remaining Useful Life.

RAB Calculation							
			Yr0	Yr1	Yr2	Yr29	Yr30
			R'm				
Original Cost		1	100.00	100.00	100.00	100.00	100.00
Capex		2	100.00	–	–	–	–
Depreciated original cost brought forward		3	–	100.00	96.67	6.67	3.33
Current period depreciation	2/RUL	4	–	3.33	3.33	3.33	3.33
Depreciated original cost carried forward	3-4	5	100.00	96.67	93.33	3.33	–
		6					
TOC opening balance	13	7	–	100.00	101.50	26.13	13.72
Accumulated trend		8	–	–	4.83	19.47	10.39
Current period trend	7*cpi	9	–	5.00	5.08	1.31	0.69
Trended balance on which Return earned	8+9	10	–	5.00	9.91	20.77	11.07
Trend depreciation allowance	10/RUL	11	–	0.17	0.34	10.39	11.07
Accumulated trend carried forward	10-11	12	–	4.83	9.57	10.39	–
TOC closing balance	5+12	13	100.00	101.50	102.90	13.72	–
		14					
Total depreciation and amortisation	4+11	15	–	3.50	3.68	13.72	14.41
		16					
Regulatory Asset Base	**3+10**	**17**	**–**	**105.00**	**106.58**	**27.44**	**14.41**

New tug prepared for launch.

Annexure B

Asset Description	Remaining Useful Life	RAB Depreciation & Valuation Treatment	Maintenance allowed as part of operational Expenditure	Return allowed (included in RAB calculation for return purposes)	Notes
Short term assets	5 years or less	Straight line historical cost	Yes	Yes	
Existing assets in use not fully depreciated	More than 5 years	TOC	Yes	Yes	
Existing assets in use fully depreciated	Any	If leased, lease revenue will be assumed value If not leased (e.g. breakwater), maintenance on the asset may be capitalised	Yes / Optional	Allowed to capitalise maintenance. Value on RAB for return calculation will be 0.	Risk of gold plating requires prudency assessment and NPCC approval for Capex inclusion in RAB.
Assets no longer in use	Any	Removed from RAB	Yes	No	
Assets acquired for strategic purposes (e.g. land)	Any	Included in RAB	Allowed on a case-by-case basis	Return will be deemed equal to lease revenue. Value on RAB will be 0 until in use.	

Notes:
Capitalisation dates will be 1990 if no capitalisation date post 1990 is available.

section 5

Record of Decision

Weighted Efficiency Gains from Operations

National Ports Authority pilot boat at work in the Port of Durban.

Deep water container terminal at the Port of Ngqura.

section 5

Contents

Introduction

In 2017/18 the Ports Regulator of South Africa (the Regulator) published a Multi-Year Tariff Methodology, applicable for the 2018/19–2020/21 tariff period. The Methodology, whilst following the basic Required Revenue principles, introduced an efficiency incentive in the form of a Weighted Efficiency Gains from Operation (WEGO), with up to 5% additional profit allowable to the NPA for a 10% increase in year-on-year improvement on a basket of key performance indicators (KPIs), and similarly up to 5% decrease in profit allowable for a decline in performance of up to 10%. As set out in the Methodology, the key performance indicators (KPIs) were to be selected by the Port Consultative Committee (PCC) and the National Ports Authority (NPA) with the Regulator deciding on the final basket of KPIs and their weightings on an annual basis.

Purpose

Stakeholder consultations on the WEGO were held by the Ports Regulator at each of the Port Consultative Committee (PCC) port performance road shows and the subsequent PCC subcommittee meetings during 2017, to provide guidance to the PCCs and the NPA in determining the KPI and their weightings for submission to the Regulator for the measurement of the Weighted Efficiency Gains from Operation (WEGO) at each port. In selecting the KPIs, PCCs and the NPA per region were requested to take into account the particulars of the port's operating context, it's (in) efficiencies, its strengths, and its weaknesses. The basket of selected KPIs was, as far as possible, to have covered performance across the port value chain including waterside and landside performance indicators. Both PCC and NPA suggested KPIs and concerns were taken into account in the final outcome, despite some areas of differences between the NPA and port users. It is anticipated that the actual performance results year-on-year will iteratively feedback into future KPI baskets resulting in weightings that address performance realities more closely in the future.

Selecting and assigning weights to KPIs

Each of the Key Performance Indicators (KPIs) has been selected at a port level across the different cargo handling types. This means a selected KPI will be for all services rendered by the port e.g. berth productivity in a port that handles container, dry bulk, liquid bulk, automotive etc. and will be measured across all these. Further, these will be weighted based on vessel calls per terminal.

It must be noted that this process does not set performance targets. Instead, the previous best performance will be the baseline for the next year's measurements. Performance in 2017/18 will be the starting baseline. Increases/decreases in performance in 2018/19 will determine the WEGO profit/loss multiplier for 2019/20.

The significance of a KPI or set of KPIs to a port will be reflected by the weight assigned to the KPI which would all add up to 100% as set out in the multi-year methodology published in March 2017.

In assessing the inputs from port users and the NPA, the Regulator considered the submissions on the appropriate weights to be assigned to the different KPI's by the NPA as well as port users and further took into consideration the comments on the inclusion of appropriate KPI's. The Regulator has decided to exclude all but the list below due to safety concerns as expressed by PCCs. Also, KPI's aimed at Capex implementation and or maintenance were considered as falling outside of the scope of 'operations' and thus the Regulator reduced some of the proposed KPI's. In line with the methodology, this basket of KPI's will be reviewed on an annual basis.

In defining the appropriate KPI's to be included in the basket, as well as the weight apportionment, the Regulator took into consideration the differences in weightings between the NPA and port users, the fact that the WEGO is implemented for the first time and the need for a more nuanced approach to efficiency incentive targeting on a by-port basis. This supported an initial approach of equal weightings on the five approved KPI's, which approximates alignment with submissions received.

Approved KPI's and weightings

As such, taking into consideration the points raised the Regulator considered an equal weight distribution (20%) between the following KPI's to be appropriate and will apply this approach on a port level as well for the 2018/19 tariff year.

No.	Key Performance Indicator	Description	Calculation	Approved Weight
1	Ship Turnaround Time	Total hours vessels stay in port (breakwater-in to breakwater-out) divided by total number of vessels. Excludes: *force majeure* (weather delays) surge, under currents, and external power supply failures.	STT = ∑ (BWO – BWI) / (∑ vessels). ***Where:*** STT = Ship Turnaround Time BWO = Breakwater Out BWI = Breakwater In	20%
2	Ship Productivity Indicator	Total number of TEUs (for containers) or tons handled (for breakbulk and bulk cargoes) divided by toal hours in port.	SPI = ∑ (Vol/STT) ***Where:*** SPI = Ship Productivity Indicator Vol = Volume STT = Ship Turnaround Time	20%
3	Vessel Delay at Anchorage	The average delay to vessels as a direct result of X (terminal, marine services). Total of all (vessel actual berthing time – vessel planned berthing) / total number of vessels delayed. Excludes: *force majeure* (weather delays), surge, under currents, and external power supply failures.	VDx = ABT – PBT/ No. of VD ***Where:*** X is the type of delay (terminal, tug, pilotage, shipping line). ABT = Actual Berthing Time PBT = Planned Berthing Time. VD= number of vessels delayed	20%
4	Berth Productivity	Total number of TEUs (for containers), tons handled (for breakbulk and bulk cargoes), kilolitres (for liquid bulk) and number of units (for Auto/RORO) divided by Total time of ships alongside.	BP=∑ (Vol/ (LLU –FLT)) ***Where:*** LLU =Last Line Untied FLT= First Line Tied	20%
5	Ship Working Hour	Total volume handled during the total productive working hours for the vessel. Total volume for a given period, number of moves (for containers) tons handled (for breakbulk and bulk cargoes), kilolitres (for liquid bulk) and number of units (for Auto/RORO) divided by total vessel productive time i.e. (sum for all vessels during the month (last swing) – (first swing). Excludes: force majeure (weather delays), surge, under currents, and external power supply failures.	SWH= ∑ (Vol/ (LL – FL)) ***Where:*** LL = Last lift FL= First Lift	20%

Other arrangements

The Regulator will establish a technical working committee consisting of PCC port user representatives as well as the NPA. This committee will have a mandate to monitor performance, verify results and develop and agree on future KPIs and KPI weightings to better define target performance areas for inclusion in the WEGO calculation going forward.

Mr Thabadiawa Mufamadi
Chairman of the Ports Regulator of South Africa
31 March 2018

PORTS REGULATOR OF SOUTH AFRICA

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ISBN No: 978-0-621-47293-6