



**Regulatory Manual for the Tariff Year 2014/15**

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## 1. Abbreviations

AFS	Annual financial statements
CAPM	Capital Asset Pricing Model
CPI	Consumer Price Index
CWIP	Capital Work in Progress
DIA	(old) Durban International Airport site
DORC	Depreciated optimised replacement cost
ER	Expected Revenue
ETIMC	Excessive Tariff increase Margin Credit
FY	Financial year
IFRS	International financial reporting standards
JSE	Johannesburg Stock Exchange
MRP	Market Risk Premium
NPCC	National Ports Consultative Committee
OPEX	Operating expenses
PCC	Ports Consultative Committee
RAB	Regulatory Asset Base
RFR	Risk Free Rate
ROD	Record of Decision
RR	Required Revenue
TOC	Trended Original Cost
WACC	Weighted Average Cost of Capital
WACD	Weighted Average Cost of Debt
WC	Working Capital

## **2. Introduction**

The Ports Regulator has considered the NPA proposed tariff methodology as well as the submissions received from interested parties.

The Regulator, after consideration of the NPA proposal, and keeping in line with previous determinations decided to issue this interim tariff methodology, applicable to the 2014/15 Tariff year to continue to improve the level of transparency and consistency in the tariff setting process. The guidelines within this document will assist the National Ports Authority (NPA) in submitting an application that will narrow the historical gaps between what is usually requested by the NPA and subsequently granted by the Regulator. It also assists stakeholders in formulating responses to the application that will assist the Regulator in making a decision. We are of the view that this will increase regulatory certainty and reduce the asked and granted spread that has been prevalent in recent years.

The approach (applicable to the 2014/15 Tariff year) decided upon is based on the Revenue Required approach and the building blocks are set out in detail below. The Regulator, while attempting to increase regulatory certainty, must retain a degree of regulatory discretion to respond to unforeseen economic or other events, as well as anomalies and unintended consequences of a strict and autonomic application of the methodology that may impact on the sustainability of the South African Ports System. This has been captured in the guidelines below.

### **3. 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 Ports Act.

In considering the NPA's submitted tariffs the Regulator will be guided by the National Ports Act (the Act), Regulations issued under the Act and the Directives. The Regulator shall also consider the submissions contained in the application and all subsequent submissions, written and oral comments received in the consultation process, including the responses thereto, and its own information and research.

In this regard it should be noted that the Ports Regulator has promulgated Directives in terms of section 30(3) of the National Ports Act (Government Notice 825, Gazette No. 32480, and 6 August 2009). These were amended in the Directives Amendment Notice, promulgated in Government Notice 37, Gazette No. 32898 on 29 January 2010.

#### **4. Special notes on Compliance with the Directives, Regulations and National Ports Act**

4.1. The following concerns or activities that stemmed from previous ROD's are highlighted below and need to be addressed in this application:

4.1.1. Directive 22(3)(a) requires that the application set out the manner in which the tariffs have been calculated and the financial model used. The NPA did not fully adhere to this requirement in past applications. This requirement has to be met in the 2014/15 application. The Tariff Strategy process is currently dealing with aspects of this issue, but the issues not articulated therein, must be addressed, such as the financial model including all profits, cash flows, returns from cash holdings etc.

4.1.2. Directive 22(3)(b) requires that all operating costs, expenses and revenues incurred or generated from a port service or port facility, as well as the value of the capital stock related to such services or facilities are to be declared in the application. In previous applications the NPA did not break down their application to the extent required by the regulatory framework. The CAPEX programmes provided have not been provided with the level of granularity necessary to make accurate assessments on these matters.

Despite the existence of extensive processes that are engaged upon in the Port Consultative Committee's (PCC's) and the National port Consultative Committee (NPCC), the Regulator requires as an assumed outcome of the PCC and NPCC processes a higher level of detail and granularity in the information provided. A higher level of granularity of the NPA CAPEX programme is required, as previously highlighted, in particular with respect to what impact individual projects shall have on throughput, efficiency, pricing, and revenue, what the demand case is for such projects, and its implications for individual user groups in light of the proposed, but as yet unapproved, processes and outcomes in the Tariff Strategy, such as the "supply chain" and "user" tariff incidence.

4.1.3. Directive 22(3)(c) requires that the amounts to be invested and revenues that are to be utilized in port development, safety, security and environmental protection must be provided; and the manner in which these tariffs will affect the cost of doing business in the ports.

4.1.4. Directive 22(6) requires that the NPA shall maintain such accounting and financial systems that are necessary to provide the Regulator with sufficient information to

verify the pricing principles, models and information used by the NPA to calculate tariffs.

4.1.5. Directive 23(1) requires that the Regulator must have regard to whether the requested tariffs reflect and balance a range of considerations:

- (i) 23(1)(a) - **a systematic tariff methodology that is applicable on a consistent and comparable basis**. The applicant has submitted a Tariff Strategy that aims to address this shortcoming. Included in this is their acknowledgement that their current pricing structure as articulated in the current tariff book is flawed. The Regulator shall in due course issue guidelines that address the immediate responses that will be required in the implementation of the tariff strategy for the 2014/15 tariff year.
- (i) 23(1)(b) - **fairness**. As stated in the clause above, although there are certain flaws in the tariff structure, the NPA is attempting to address it in their Tariff Strategy proposal. The Regulator will provide guidance to the NPA in order to attempt to address some of the most glaring of these flaws in the intervening period while the Tariff Strategy is finalised. The Regulator, as indicated above, will provide the NPA, after the tariff decision is announced, with guidelines for the amendment of the NPA 2014/15 Tariff Book to target the specific matters that will be addressed over that period. The guidelines will provide general rules to assist in the allocation of costs and may determine specific tariff adjustments to be included in the overall tariff book amendments.
- (ii) 23(1)(c) - **the avoidance of discrimination, save where such discrimination is in the public interest**. As in the clauses above, although there are certain flaws in the tariff structure, the processes subsequent to the overall tariff determination shall address this matter.
- (iii) 23(1)(f) - **the avoidance of cross-subsidisation, save where in the public interest**. The comments with respect to the Tariff Strategy have reference under this provision.
- (iv) 23(1)(g) - **promotion of access to ports and efficient and effective management and operation of ports**. The information provided in previous applications was not sufficient to determine the performance under this provision. Although this was not clearly articulated in past applications, the

internal processes of the NPA and the processes that the NPA is undergoing in the Ports Consultative Committees address some, but not all, of the concerns that arise under this provision. Specific rules for filing, information requirements and information standards shall be engaged upon in due course.

Further specific concerns stemming from previous applications:

- 4.1.6.A further level of detailed exposition on transfer pricing and internal transfers or payments within the Transnet group that affect NPA, than had previously been presented is required, with special reference to the specific matters that had been requested with respect to the Transnet transfer payments that were allowed. As example, calculation of the benefit that is gained by Transnet from cash of the NPA that is held by Transnet during any tariff period.
- 4.1.7.A review of the NPA's depreciation policies and their compliance to regulatory norms is required. Although the financial accounting policies may be correct, in certain areas (depreciation included) the Regulator may require the information to be reported on a different basis from what is in the established accounting practice of the regulated entity
- 4.1.8.Clarity on the cash holdings and benefits resulting therefrom must be provided and fully accounted for.
- 4.1.9.The annual CAPEX projections of the NPA over the five and ten year cycles must be better articulated and tied to demand and traffic forecasts.
- 4.1.10. The applicant only included high level data on the Real Estate business in past applications. The data was adequate for purposes of calculating the tariff level. However, the requirement of the Regulator as stated in the 2011/12 Record of Decision is that full disclosure is required for all NPA business – i.e., both the Marine and the Real Estate business. This must be addressed in the 2014/15 application. The information should be provided to a similar level of detail as is provided for the marine business of the NPA.
- 4.1.11. Further issues for which methodological guidance remains outstanding will be addressed in the medium term regulatory manual for the period beyond 2014/15, as well as the Regulator's compliance and monitoring processes.



## 5. Tariff methodology overview

The Required Revenue (RR) approach has been used in the past by the Regulator for determining the tariff amendments in response to the NPA annual tariff applications since the inception of the current regulatory regime. The Regulator has decided, for the 2014/15 FY, to continue with this approach. The formula for the RR methodology is as follows:

### *Revenue Requirement*

$$\begin{aligned} &= \text{Regulatory Asset Base (RAB)} \\ &\times \text{Weighted Average Cost of Capital (WACC) + Operating Costs} \\ &+ \text{Depreciation + Taxation Expense} - (+)\text{Claw back} \\ &+ (-)\text{Excessive Tariff Increase Margin Credit (ETIMC)} \end{aligned}$$

The above formula reflects a standard building block approach to setting the revenue requirement of a regulated service provider and has been used in all previous tariff determinations in a similar way.

It requires that the NPA estimate its operating costs, depreciation, tax expense and return on capital (a product of the weighted average cost of capital and the value of assets in the Regulatory Asset Base for the period under review).

In addition, there is 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 tariffs that may arise from substantial capital expenditure programmes in future years to be partly offset by moderately higher tariff increases in the short-term.

## 6. Components of the Revenue Required Tariff Methodology

### 6.1. Regulatory Asset Base (RAB)

The RAB represents the value of assets that 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 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 CWIP over the period.

### 6.2. Calculation of the RAB

In the previous tariff determinations, the Regulator accepted the DORC method used by the applicant in certain assets to determine a starting regulatory asset base. The Regulator did state, that it had a low level of confidence in the RAB determined through the 2008 DORC method, which gave rise to a steep increase in the asset values, but regulatory certainty was required in the absence of any alternative. The Regulator retains these concerns and has commenced a process to assess the application and appropriateness of these valuations for major assets to inform subsequent assessments of RAB.

The Regulator has previously determined that the 2010/11 ROD value establishes the starting point for trending the RAB in future tariff determinations. Nonetheless, the Regulator applied a number of adjustments to arrive at an opening balance for the 2013/14 year and a subsequent calculated closing balance for the 2013/14 FY. The inclusion of the Durban Internal Airport (DIA) site purchase price was reversed, as the site has not been **legislatively** incorporated and established as a port within the ambit of the National Ports Act. This approach will remain in place until such time as the legal status of the DIA changes.

The RAB formula applicable to the 2014/15 tariff year is as follows:

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

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

Where:

$RAB_y$	<i>is the value of the RAB that is used to determine the returns for the period y;</i>
$RAB_{o,y}$	<i>is the opening value of RAB for the period y;</i>
$RAB_{c,y}$	<i>is the closing value of RAB for the period y;</i>
$w_y$	<i>is the forecast working capital over the period y;</i>
$CWIP_Y$	<i>is the value of expected capital investment over the period;</i>
$D_y$	<i>is the depreciation allowance for assets within the opening RAB held to the end of period y;</i>
$CPI_y$	<i>is the annual rate of inflation expected over the period y.</i>

### **6.2.1. Depreciation**

The depreciation of the assets in the RAB will be calculated as straight line 40 year depreciation on the opening balance of the RAB ( $RAB_{o,y}$ ).

### **6.2.2. Inflation trending**

The inflation rate for calculating the trend in the value of assets will be the general CPI forecast for 2014/15. The same inflation rate will be used in the calculation of the weighted average cost of capital.

### **6.2.3. Capital Works in Progress (CWIP)**

Detailed projections for the 2014/15 FY per asset class, service and project must be provided to motivate the CWIP to be included in the RAB.

### **6.2.4. Working Capital**

The estimate of working capital, equates to the actual *Net* working capital as per the latest available NPA annual financial statements (not the change in working capital as per previous applications), consisting of accounts receivable plus inventory less accounts payable (i.e. operating cash is excluded), adjusted by forecast volume growth and CPI inflation for 2014/15. In addition, capital work in progress *payables*, which are estimated at 1/12<sup>th</sup> of the capital expenditure projected for that year is included.

### 6.3. Weighted Average Cost of Capital (WACC)

#### 6.3.1. Vanilla WACC

In general, the weighted average cost of capital (“WACC”) is the minimum return that a company must make on its investment in order to continue to attract capital, given the risks that investors carry when they commit funds to the business.

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

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

Where:

*k<sub>e</sub>* - cost of equity (post tax, real).

*k<sub>d</sub>* - cost of debt (pre-tax - i.e., free of any adjustments for the tax shield on interest, real).

*g* - gearing (defined as the ratio of debt over debt plus equity).

#### 6.3.2. Risk Free Rate

The twenty year government bond is an appropriate measure of the risk free rate, and, in particular, the R186 bond instrument (yield) as it adequately reflects the market’s perception of sovereign risk and inflation going forward. The average risk free rate calculated over a 5 year period (from August 2008 to July 2013).

The *Real* risk Free Rate 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

### **6.3.3. Market Risk Premium**

The Market Risk Premium is in essence forward-looking and, as such, it cannot be observed but must be predicted. As a result, the measurement of a market risk premium is problematic. For the 2014/15 FY tariff assessment, the Regulator will use the Dimson, Marsh and Staunton (DMS) estimate of the arithmetic mean MRP as measured against bonds for South Africa to determine a MRP for the NPA cost of equity calculation.

### **6.3.4. Beta**

Because the NPA is not a traded company, the choice of comparators used to calculate a Beta must be as similar as possible to reflect the actual risks faced by NPA under the RR methodology. This is to prevent it substantially overestimating (or underestimating) the appropriate return for the risk faced.

The inclusion of a claw-back mechanism, the introduction of the ETIMC and the inherent public nature of the NPA and the existence of an interventionist regulatory regime requires the Regulator to use a Beta substantially lower than proposals such as the JSE top 40.

For the 2014/15 tariff year, the Regulator will use the 0.50 asset beta decided upon in the previous ROD's.

The tariff methodology for the period beyond the 2014/15 tariff year is currently being reviewed. The resultant outcome will determine a standard approach to the establishment of the beta coefficient applied in subsequent determinations, as this is commonly the largest factor impacting on the differential between the tariff requested and the tariff increase granted. As such, the Regulator decided to continue on its trajectory and determined an asset beta of 0.5 is to be applied, Given a D:E ratio of 1:1 (See section 7.5) this equates to an equity beta of 0.86 using the Hamada equation to re-lever the beta:

### 6.3.5. Gearing

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, determined that an appropriate gearing for the entity for the 2014/15 tariff year is 50%.

### 6.3.6. Cost of Equity

The post-tax cost of equity is calculated with reference to the capital asset pricing model (CAPM), which is expressed as:

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

Where:

*r<sub>f</sub>* is the real riskfree rate

*β* measures the NPA's exposure to market (non – diversifiable) risk

*MRP* is the market risk premium measuring the premium over and above the risk – free rate that investors might expect to earn

### 6.3.7. Cost of Debt

NPA's actual, embedded debt costs should be used to determine the cost of debt applied within the WACC. The average embedded Transnet group cost of debt (*pre-tax nominal*) of Transnet Ltd should be used for the 2014/15 tariff year as no current alternative exists. This matter will be further addresses in the subsequent manual.

## 6.4. Taxation

The Regulator will accept the corporate tax rate of 28% for the 2014/15 Tariff Year. The Regulator will use the pass-through tax approach, where the vanilla WACC will be applied to the average RAB for the period under consideration, less the interest cost of debt and the capital expenditure payments impact. The corporate tax rate will be used to determine the tax liability, which shall be treated as an expense in the RR calculation.

$$\text{Tax allowance} = (\text{Net revenue before tax allowance}) / (1-t) * t$$

“Net revenue before tax allowance” is the revenue after all costs including interest and depreciation, have been accounted for. I.e. it is the net return to equity before being grossed up to make allowances for taxation.

### **6.5. Operating Expense**

The Regulator will analyse the operating cost estimates for 2014/15 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 like labour and energy costs. This will include (not an exhaustive list, merely guidance as to the kind of granularity), as example for all line items, having to provide:

- the amount of posts in the approved establishment (organogram);
- current employees(number and cost);
- vacant posts(number and cost);
- the percentage of posts of the total for each of the years that have been vacant over the last 5 years(number and cost);
- the split in labour costs between overtime, salaries and bonuses;
- the actual remuneration increases granted over the last 5 years(percentage and value);
- the spread between budgeted and actual labour costs for every year of the last five years;
- the value of services/labour that is “purchased” from Transnet group or any of its divisions;
- the value of services/labour that is provided by the NPA to Transnet or any of its divisions without recovery of the costs of providing such labour/service;
- the split between expenditure on electricity and other kinds of energy(liquid fuels etc);
- the portion of the energy budget that is merely pass through to tenants or other Transnet divisions, versus actual energy usage by the NPA operations; and,
- all and any information that would allow the Regulator and stakeholders to assess the probity of expenditure that is budgeted.

The Regulator will only 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 amount to be transferred to Transnet group. This will be expected on a level of granularity that will

allow assessment of its probity and necessity, as well as the actual services/goods received, and for which function of the NPA it was utilised.

The Regulator will further require that, in line with the 2013/14 ROD, an externally audited financial report (with all supporting documentation and detailed explanations including basis of allocation, services/goods received and policy documents that support such allocation) on all line items that form part of the group costs that have been expended for the first half of the NPA 2014/15 financial year be submitted to the Regulator no later than 1 December 2014.

In addition, the NPA shall provide an externally audited financial report (with all supporting documentation and detailed explanations including basis of allocation and policy documents that support such allocation) on all line items that form part of the R620 million group costs that have been expended for the 2013/2014 NPA financial year by 1 August 2015.

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.

#### **6.6. 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 reducing and sharing risks faced by all port system participants including the NPA. It's 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, to ensure the coherence and integrity of the regulatory regime.

In line with previous Record of Decisions, the Regulator will spread the total impact of over/under recovery of revenue over a period of two tariff determinations. The Regulator will remove the interim claw-back (50%) of the forecast over or under recovery from the revenue allowed. At the subsequent tariff decision, the Ports Regulator will remove the residual under/over-recovery and the return on the amount based on the audited actual year end revenue.



## **6.7. Excessive Tariff Increase Margin Credit (ETIMC)**

The Regulator regulates in the long term interest of the industry. This requires that the Regulator not only confine itself to the immediate tariff decision, but also consider ways to ease any future shocks to the system that are capable of being managed sustainably within the space that is available for such intervention. It is generally accepted that capital expenditure will spike at some point in the foreseeable future, but that these projects have not as yet been specified to a level of detail that allows for accurate prediction. As such, the Regulator considers it prudent to avoid future tariff spikes by retaining and increasing the NPA's Excessive Tariff Increase Margin Credit (ETIMC), to allow the smoothing of unaffordable tariff spikes over multiple periods.

Because the ETIMC is in fact 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. The return on the ETIMC will be factored into the balance calculation to be included in the 2014/15 ROD.

In the 2012/13 decision, the Regulator retained R 900 million of the claw back in the ETIMC. The ETIMC retained for the 2013/14 period is R 1 378 million with a resulting closing 2013/14 ETIMC balance of R2 390 million.

## **7. Tariff Structure**

The Regulator will provide the NPA, after the overall tariff determination, with guidelines in accordance with which the tariff book, must be amended.

The guidelines will provide general rules to assist in the allocation of costs and may determine specific tariff adjustments to be included in the overall tariff book amendments.