RUSTENBURG JOINT VENTURE

PETROLEUM STORAGE FACILITY

MULTI YEAR TARIFF APPLICATION

2014 & 2015

License Number	PPL.sf.F3/32/1/2006
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2 Acronyms and Abbreviations

α	Project specific risk if the circumstances warrant such an adjustment
β	'Beta' is the systematic risk parameter for regulated entities providing pipeline, storage and loading facility services
AR	Allowable revenue
BFP	Basic fuel price
C	Clawback adjustment
CAPM	Capital asset pricing model
CPI	Consumer Price Index
CPIA	Consumer price index adjustment
CPIf	Consumer price index forecast
CRA	Country risk adjustment
d	Accumulated depreciation and accumulated amortisation of inflation write-up
D	Depreciation and amoritisation of inflation write-up: charge for the tariff period under review
Da	Depreciation actual
DA	Depreciation adjustment
da	Actual accumulated depreciation and amortisation of inflation write-up
Dp	Depreciation projected
dp	Projected accumulated depreciation and amortisation of inflation write-up
DSCR	Debt service cover ratio
Dt	Interest bearing debt
Dtax	Deferred tax
Dtp	Debt premium
E	Expenses: maintenance and operating for the tariff period under review
Eq	Shareholders' equity
GA	General adjustment
HSE	Health, Safety Environment
Kd	Post tax, real cost of debt
KdA	Cost of debt adjustment
Ke	Post-tax, real cost of equity
KeA	Cost of equity adjustment
KL	Kilo Litre (1000L)
L	Litre
l	Litres
LP	Liquidity premium to accommodate companies which are not publicly traded
m	Millions
m3	Metric tons (equals 1,000 litres)
ml	Million Litres
MRP	Market risk premium
NERSA	National Energy Regulator of South Africa
NRBTA	Net revenue before tax allowance

Opex	Operating and maintenance expense
Opexa	Operating and maintenance expense actual
Opexp	Operating and maintenance expense projected
PAIA	Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)
pg	Page
PIR	Prime interest rate
PPR	Petroleum Pipelines Act, 2003 (Act No 60 of 2003)
RAB	Regulatory asset base
RD	Regulation date for the purpose of this report DATE 2010
Rf	Risk-free rate of interest
Rft	The average monthly marked-to-market real risk-free rate of interest for the preceding period indicated
SSP	Small stock premium
t	Prevailing corporate tax rate of the licensee
T	Tax expense
Tff(s)	Tariff(s)
TOC	Trended original cost
Tr	Tax rate of relevant country
V	Value of property, plant, vehicles and equipment
(V-d)	A Value of operating property, plant, vehicles and equipment adjustment.
VAT	Value added tax
VolA	Volumes adjustment
Vola	Volumes actual.
Volp	Volumes projected.
w	Net working capital
WACC	Weighted average cost of capital

3 Tables and Figures

4 Executive Summary

1. Engen Petroleum Limited, hereafter referred to as Engen, hereby applies for the Rustenburg storage facility tariff to the Energy Regulator of South Africa (NERSA):

Facility	Year	Volume Throughput	Low	Medium	High
			500-3500m^3	3501-7000m^3	7000m^3 +
Rustenburg	2014		4.68c/l	3.74c/l	3.00c/l
Rustenburg	2015		4.30c/l	3.44c/l	2.75c/l

Table 1: Final Tariff per year: Rustenburg Facility: 2014 & 2015

2. Engen applies to use a tariff reduction table if uncommitted capacity becomes available. The sizes of the categories are determined on the size of the facility's operation. As a general rule, the tariff for low volumes stored is the maximum tariff, the tariff for medium volumes stored is 20% less than the maximum tariff and the tariff for high volumes stored is a further 20% less than the tariff for medium volumes. The tariff reduction tables are based on the principle that lower tariffs are charged for higher volumes stored.

3. The entry tariff is four point six eight cents per litre throughput for the 2014 financial year and four point three cents per litre throughput for the 2015 financial year.

3. Engen as the operating licensee of the Rustenburg facility hereby applies for tariffs for the period **1 JANUARY 2014 to 31 DECEMBER 2015** hereafter referred to as the tariff period(s) under review. The tariff will be reviewed annually and adjusted if material differences occur. The tariff will be in place until the next submission to NERSA.

4. This is a joint venture facility operated by Engen on behalf of Chevron South Africa (Pty) Ltd, hereafter referred to as Chevron, and BP Southern Africa (Pty) Ltd, hereafter referred as to as BP SA. A joint venture is a commercial enterprise undertaken jointly by two or more parties which otherwise retain their distinct identities. This joint venture is structured as a cost share joint venture with a cost share split structure of 33.33%: 33.33%: 33.33% illustrated as follows:

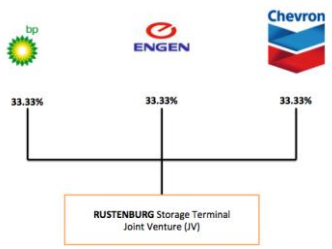

Figure 1: Rustenburg JV Structure 2014 & 2015

5. This is an operating joint venture facility were each JV partners contributes assets to the joint venture at the start of its operations. The title to the assets remains with the individual JV partners.

5 Introduction

1. Engen (Company A) as the operator/host of the Rustenburg facility Joint Venture (JV) submits its 2014 and 2015 petroleum storage and loading application in terms of section 28(2) of the Petroleum Pipelines Act, 2003, on behalf of the Joint Venture Participants Engen, Chevron (Company B) and BP SA (Company C), to the National Energy Regulator South Africa (NERSA). This report should be read in conjunction with the detailed excel workbooks:

- RUSTENBURG Storage (JV)_Tariff CALC _2014_2015_ENGEN Data .xls
- RUSTENBURG Storage (JV)_Tariff CALC_2014_2015_CHEVRON Data. xlsx
- RUSTENBURG Storage (JV) _Tariff CALC_2014_2015_BP SA Data .xls
- RUSTENBURG Storage (JV)_Tariff CALC_2014_2015_CONSOL Data. xlsx

5.1 Facilities licenses held

1. Engen as the holder/operator of the license for the Rustenburg Joint Venture Terminal hereby submits its application for storage tariffs facilities as licensed **PPL.sf.F3/32/1/2006.**

5.2 Tariff summary

1. The following table summarises the Rustenburg Petroleum Storage Facility Joint Venture, hereafter referred to as the Rustenburg facility, tariff application:

Tariff per litre		**RUSTENBURG**			
		2014	**2014**	**2014**	**2014**
(Excl. Vat)	*Formula*	**Company A**	**Company B**	**Company C**	**Summary**
Allowable Revenue (R'm)	(AR)	[redacted]	[redacted]	[redacted]	[redacted]
		-	-		
Volume (L'm)	(V)	[redacted]	[redacted]	[redacted]	[redacted]
		-	-		
Tariff (cents per litre)	Tff/L	[redacted]	[redacted]	[redacted]	**4.68**
		2015	**2015**	**2015**	**2015**
		Company A	**Company B**	**Compa**	**Summary**
Allowable Revenue (R'm)	(AR)	[redacted]	[redacted]	[redacted]	[redacted]
		-	-		
Volume (L'm)	(V)	[redacted]	[redacted]	[redacted]	[redacted]
Tariff (cents per litre)	Tff/L	[redacted]	[redacted]	[redacted]	**4.30**

Table 2: Tariff summary: Rustenburg Facility: 2014 & 2015

2. Tariffs are expressed in cents per litre based on total throughput. These are maximum tariffs and are exclusive of VAT. These tariffs are for the period under review or until such later date that NERSA approves new tariffs proposed by Engen.

3. Engen applied the following formula to calculate the tariffs per facility:

Tariff per facility (cents per litre (cpl) = Allowable Revenue for the facility (Rands) *100 / Total volume per facility (Litre) (Throughput per annum)

4. The total throughput **volume** is based on **actual throughput** volume for the period **1 JANUARY 2013 to 31 DECEMBER 2013** as per volume reports, and forecasted for 2014 and 2015 based on historic trend analysis by marketing and supply chain departments.

5.3 Third party requests

1. Other than existing arrangements with licensed operators there have been and are currently no third party requests for use of the storage facility.

2. Engen have committed to enter into an agreement (Third Party User Agreement) with any third party relating to the use by such third party of the Rustenburg facility and prescribing the rights and obligations of the parties in the agreement.

6 Tariff methodology applied

1. The NERSA tariff methodology (Tariff methodology for the approval of tariffs for petroleum loading facilities and petroleum storage facilities, approved 31 March 2011) and the NERSA guidelines (Guidelines for annual assessment of storage and loading facilities tariff applications, Version: 9 JULY 2012) were used as reference in this tariff application.

2. Guidelines form part of regulations and also influence the way in which tariffs are set. The current Regulations in terms of the Petroleum Pipelines Act, 2009 (Act No. 60 of 2003), were published in Government Notice R342 GG 30905 of April 2008.

3. Engen as operating partner of this joint venture utilised Generally Accepted Accounting Principles in consolidating the tariff calculation. Making sure that expenses or assets were not double counted and using a weighted capital structure to determine the weighted average cost of capital. All data used in this application from both JV partners was actual results for financial year 31 December 2013 and budgeted results for the financial years **1 January 2014 to 31 December 2014 and 1 January 2015 to 31 December 2015**, unless otherwise stated.

6.1 Allowable Revenue (AR)

1. The following formula was used to determine the Allowable Revenue:

AR = (RAB x WACC) + E + D + T

Where:

AR =	Allowable revenue
RAB =	Regulatory asset base Refer 6.36.3
WACC =	Weighted average cost of capital

Refer 6.4

E = Expenses: operating and maintenance expenses for the tariff period under review

Refer 6.5

D = Depreciation and amortisation of inflation write-up: the charge for the tariff period under review

Refer 6.7

T = Tax: estimated tax expense for the tariff period under review

Refer 6.8

2. Engen as the JV host recognizes that the methodology allows for a clawback adjustment. Engen does not intend to utilise this adjustment for the first application.

3. The following tables represent the allowable revenue calculation for the facility. The individual items of the formula are discussed in more detail below.

Allowable Revenue		**RUSTENBURG**			
		2014	**2014**	**2014**	**2014**
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Debt %	(d:[e+d])	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Cost of Debt	($Kd_{post\text{-}tax,real}$)	0.40%	0.40%	0.40%	0.40%
Equity %	(e:[e+d])	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Cost of Equity	($Ke_{post\text{-}tax,real}$)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Weighted Average Cost of Capital %	($WACC_{post\text{-}tax,real}$)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
		Rm	**Rm**	**Rm**	**Rm**
Regulatory Asset Base	**TOC O/B**	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Return on Debt funding	RAB * Kd * Debt%	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Return on Equity funding	RAB * Ke * Equity%	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Total Return on Assets required	**(RAB x WACC)**	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Total Operational Expenses	(E)	[redacted]	[redacted]	[redacted]	[redacted]
Operating Expenses		[redacted]	[redacted]	[redacted]	[redacted]
Corporate head office costs		[redacted]	[redacted]	[redacted]	[redacted]
Historic Depreciation	(D)	[redacted]	[redacted]	[redacted]	[redacted]
Amortisation of Write up	(D)	[redacted]	[redacted]	[redacted]	[redacted]
Clawback adjustments	(C)	--	--	--	--
		[redacted]	[redacted]	[redacted]	[redacted]
Notional Taxation	(T)	[redacted]	[redacted]	[redacted]	[redacted]
Allowable Revenue	**(RAB x WACC) + E + T + D +- C**	[redacted]	[redacted]	[redacted]	[redacted]

		2015	2015	2015	2015
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Debt %	(d:[e+d])	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Cost of Debt	($Kd_{post\text{-}tax,real}$)	0.40%	0.40%	0.40%	0.40%
		-	-	-	-
Equity %	(e:[e+d])	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Cost of Equity	($Ke_{post\text{-}tax,real}$)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Weighted Average Cost of Capital %	($WACC_{post\text{-}tax,real}$)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
		Rm	**Rm**	**Rm**	**Rm**
Regulatory Asset Base	**TOC O/B**	[redacted]	[redacted]	[redacted]	[redacted]
Return on Debt funding	RAB * Kd * Debt%	[redacted]	[redacted]	[redacted]	[redacted]
Return on Equity funding	RAB * Ke * Equity%	[redacted]	[redacted]	[redacted]	[redacted]
Total Return on Assets required	**(RAB x WACC)**	[redacted]	[redacted]	[redacted]	[redacted]
Total Operational Expenses	(E)	[redacted]	[redacted]	[redacted]	[redacted]
Operating Expenses		[redacted]	[redacted]	[redacted]	[redacted]
Corporate head office costs		[redacted]	[redacted]	[redacted]	[redacted]
		-			-
Historic Depreciation	(D)	[redacted]	[redacted]	[redacted]	[redacted]
Amortisation of Write up	(D)	[redacted]	[redacted]	[redacted]	[redacted]
Clawback adjustments	(C)	---	---	---	---
Notional Taxation	(T)	[redacted]	[redacted]	[redacted]	[redacted]
Allowable Revenue	**(RAB x WACC) + E + T + D + C**	[redacted]	[redacted]	[redacted]	[redacted]

Table 3: Allowable revenue calculation: Rustenburg Facility: 2014 & 2015

6.2 Volume

6.2.1 Capacity

The total capacity for this this facility is 17.6 m litres. This is made up of 6 tanks with a working capacity of [redacted] m litres and an un-pumpable need [redacted] m litres. Engen is expecting to utilise [redacted]% in 2014 & 2015 with an average turn of [redacted] turns per month for 2014 and [redacted] for 2015. See table below for summary. Utilisation forecast and average turn per month is based on historic experience.

CAPACITY	Summary	Summary
	2014	2015
Trading name	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**
Number of tanks	26	26
Working tank capacity (m³)	[redacted]	[redacted]
Un-pumpable (inlcl. Line fill) capacity (m³)	[redacted]	[redacted]
Safety capacity(m³)	[redacted]	[redacted]
Total Site Capacity (m³)	11,550	11,550
Average Tank capacity (m³/tank)	[redacted]	[redacted]
Total Working Capacity (ml)	[redacted]	[redacted]
Capacity Utilised per month	[redacted]%	[redacted]%
Expected volume per month (ml)	[redacted]	[redacted]
Average Turn per month (Actual/Forecast)	[redacted]	[redacted]
Expected volume per annum(ml)	[redacted]	[redacted]

Table 4: Capacity: Rustenburg Facility 2014 & 2015

6.2.2 Throughput

1. The total throughput forecasted for the tariff period:

VOLUMES THROUGHPUT (M³)	Company A	Company B	Company C	Summary
	2014	2014	2014	2014
Trading name	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**
LEAD REPLACEMENT PETROLEUM (LRP93) (Litres)	[redacted]	[redacted]	[redacted]	[redacted]
UNLEADED PETROLEUM (ULP93) (Litres)				
UNLEADED PETROLEUM (ULP95) (Litres)				
DIESEL 500 ppm (0.5) (Litres)	[redacted]	[redacted]	[redacted]	[redacted]
DIESEL 50 ppm (0.05) (Litres)				
ILLUMINATED PARAFFIN (IK) (Litres)	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL Throughput (M³)	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL Throughput (ml)	[redacted]	[redacted]	[redacted]	[redacted]
	Company A	**Company B**	**Company C**	**Summary**
	2015	**2015**	**2015**	**2015**
Trading name	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**	**RUSTENBURG Terminal**
LEAD REPLACEMENT PETROLEUM (LRP93) (Litres)	[redacted]	[redacted]	[redacted]	[redacted]
UNLEADED PETROLEUM (ULP93) (Litres)				
UNLEADED PETROLEUM (ULP95) (Litres)				
DIESEL 500 ppm (0.5) (Litres)	[redacted]	[redacted]	[redacted]	[redacted]
DIESEL 50 ppm (0.05) (Litres)				
ILLUMINATED PARAFIN (IK) (Litres)	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL Throughput (M³)	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL Throughput (ml)	[redacted]	[redacted]	[redacted]	[redacted]

Table 5: Throughput: Rustenburg facility 2014 & 2015

6.3 Regulatory Asset Base (RAB)

6.3.1 RAB methodology and application

1. The following formula was used to determine the value of the Regulatory asset base:

RAB= (V – d) + w ± dtax

Where:

V= Value of operating property, plant, vehicles and equipment
Refer 6.3.2

d = Accumulated depreciation and accumulated amortisation of inflation write-up for the period up to the commencement of the tariff period under review
Refer 6.3.3

w = Net working capital
Refer 6.3.5

dtax = Deferred tax
Refer 6.3.6

2. The following tables summarises Regulatory Asset Base (RAB) calculation per facility:

		RUSTENBURG			
Regulatory Asset Base (R' millions)		**2014**	**2014**	**2014**	**2014**
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Total Trended Cost	**(V-d)**	[redacted]	[redacted]	[redacted]	[redacted]
Working Capital	w	[redacted]	[redacted]	[redacted]	[redacted]
Deferred Taxation	dtax	[redacted]	[redacted]	[redacted]	[redacted]
Regulatory Asset Base	**(V-d) +w ± dtax**	[redacted]	[redacted]	[redacted]	[redacted]
		2015	**2015**	**2015**	**2015**
		Company A	**Company B**	**Company C**	**Summary**
Total Trended Cost	**(V-d)**	[redacted]	[redacted]	[redacted]	[redacted]
Working Capital	w	[redacted]	[redacted]	[redacted]	[redacted]
Deferred Taxation	dtax	[redacted]	[redacted]	[redacted]	[redacted]
Regulatory Asset Base	**(V-d) +w ± dtax**	[redacted]	[redacted]	[redacted]	[redacted]

Table 6: RAB: Rustenburg Facility: 2014 & 2015

6.3.2 Value of Operating Property, Plant, Vehicles and Equipment (V)

1. The value of prudently acquired property, plant, vehicles and equipment that was used in the tariff period under review comprises only non-current assets plus a pro rata portion (of new or additional property, plant, vehicles and equipment that will be used during the tariff period under review. (For categories of non-current assets see Annexure A: Asset and Liability Categories, 'Non-Current Assets').

2. Non-current operating assets, taking into account allowed deductions, was valued on the trended original cost (TOC) basis or in accordance with sub-regulation 5.2 of the Regulations made in terms of the

Petroleum Pipelines Act, 2003 (Act No. 60 of 2003) (GN R342 GG 30905 of 4 April 2008). Refer below to Table 7: TOC Summary: Rustenburg Facility: 2014 for a summary of the trended original cost.

3. Planned assets methodology is to take into account the pro rata in use and trended for the pro rata period (if applicable). Due to the uncertainty in planned assets in use date, planned asset where brought into use at the end of the tariff period.

6.3.3 Accumulated historic depreciation and accumulated amortisation (d)

(of inflation write-up for the period up to the commencement of the tariff under review 1 January 2014)

1. Accumulated historic depreciation and accumulated amortisation of inflation write-up is the cumulative depreciation against operating property, plant, vehicles and equipment in service.

2. See Table 7: TOC Summary: Rustenburg Facility: 2014 below for a summary of the RUSTENBURG facility trended original cost including (V) and (d). Separate spreadsheets are provided for the detailed calculations.

6.3.4 Useful life methodology

6.3.4.1 Existing Assets

1. The lifetime of assets were determined individually based on the life of the asset have been utilised and the useful life versus years of depreciation utilised in calculating starting regulatory asset base (SRAB).

2. Information on the SRAB as was determined by the consultants with engineers on site and show treatment of depreciation over the lifetime of the assets up to the point of using a specific value as the SRAB.

3. The total useful lives were re-assessed at the start of the tariff period. Using the accounting records to determine years in service from the start date of the asset, the total useful life could then be determined.

4. The differences of individual assets accounting vs useful life and effect on depreciation for tariff period, is shown in the individual company asset calculation sheets for trended cost and the fixed asset register.

6.3.4.2 Planned assets

1. Lifetime of the assets is reflected as planned assets as pro-rated and included in RAB. And trended for pro rata time. The timing of the planned assets was too uncertain to bring the assets into use in the tariff period under review. No planned assets were taken into consideration in this tariff application

	Trending of Asset Value (TOC)	Company A	Company B	Company C	Summary
1	Tariff Period	2014	2014	2014	2014
2	**Remaining Asset Useful Life**				
3	Depreciated Original Cost b/f	[redacted]	[redacted]	[redacted]	[redacted]
4	Depreciation (historic)				
5	Depreciated original cost (V-d) RAB Bal c/f				
6	Historic CPI from MRP sheet	5.70%	5.70%	5.70%	5.70%
7	**Inflation write-up balance**				
8	Inflation write-up bal b/f	[redacted]	[redacted]	[redacted]	[redacted]
9	Current period inflation write-up				
10	Write up balance on which WACC should be earned	[redacted]	[redacted]	[redacted]	[redacted]
11	Amortization of write-up	[redacted]	[redacted]	[redacted]	[redacted]
12	Write-up bal net of amortization carried forward	[redacted]	[redacted]	[redacted]	[redacted]
13	TOC Closing Balance (c/f)	[redacted]	[redacted]	[redacted]	[redacted]
14	TOC Opening Balance (b/f) balance to inflate	[redacted]	[redacted]	[redacted]	[redacted]
	Total amount on which WACC should be earned[ADD BACK THIS YEAR DEPRECIATION AND AMORTIZATION]	[redacted]	[redacted]	[redacted]	[redacted]
15	Historic Depreciation for the year	[redacted]	[redacted]	[redacted]	[redacted]
16	Amortization of TOC for the year	[redacted]	[redacted]	[redacted]	[redacted]
17	Total D in formula	[redacted]	[redacted]	[redacted]	[redacted]

18	**Trending of Asset Value (TOC)**	**Company A**	**Company B**	**Company C**	**Summary**
	Tariff Period	**2015**	**2015**	**2015**	**2015**
	Remaining Asset Useful Life				
1	Depreciated Original Cost b/f	[redacted]	[redacted]	[redacted]	[redacted]
2	Depreciation (historic)				
3	Depreciated original cost (V-d) RAB Bal c/f				
4	Historic CPI from MRP sheet	5.60%	5.60%	5.60%	5.70%
5	**Inflation write-up balance**				
6	Inflation write-up bal b/f	[redacted]	[redacted]	[redacted]	[redacted]
	Current period inflation write-up				
7	Write up balance on which WACC should be earned	[redacted]	[redacted]	[redacted]	[redacted]
8	Amortization of write-up	[redacted]	[redacted]	[redacted]	[redacted]
9	Write-up bal net of amortization carried forward	[redacted]	[redacted]	[redacted]	[redacted]
10	TOC Closing Balance (c/f)	[redacted]	[redacted]	[redacted]	[redacted]
11	TOC Opening Balance (b/f) balance to inflate	[redacted]	[redacted]	[redacted]	[redacted]
12	Total amount on which WACC should be earned[ADD BACK THIS YEAR DEPRECIATION AND AMORTIZATION]	[redacted]	[redacted]	[redacted]	[redacted]
13	Historic Depreciation for the year	[redacted]	[redacted]	[redacted]	[redacted]
14	Amortization of TOC for the year	[redacted]	[redacted]	[redacted]	[redacted]
	Total D in formula	[redacted]	[redacted]	[redacted]	[redacted]
15					

Table 7: TOC Summary: Rustenburg Facility: 2014 & 2015

6.3.5 Net Working Capital (w)

1. Net working capital refers to various regulated activities or business operations funding requirements other than operating property, plant, vehicles and equipment in service. These funding requirements include inventories, prepayments, minimum bank balances, cash working capital and other non-plant operating requirements. Working capital funding requirements funded by investors are legitimate Regulatory Asset Base allowances on which a return may be granted.

2. Due to the fact that the facilities are operated as part of the vertically integrated business, the Rustenburg facility is not able to separately identify the receivables, operating cash, and minimum cash balance and trade payables for the storage facilities. Having said this, NERSA guideline that in the case of a storage facility within a trading depot, it is assumed that receivable is Allowable Revenue x 30/365.

3. The following formula was used to determine net working capital:

Net working capital = un-pumpable fuel inventory + receivables + operating cash - payables

4. Working capital generated out of trading (and not storage) activities should not be included. For this reason the “line fill” or “un-pumpables” were included as working capital inventory.

5. The 1 January 2014 un-pumpable volume was valued at the basic fuel price (BFP) average for all petroleum products at Gauteng at 1 January 2014. NERSA methodology states that the line fill should be valued at cost.

6. Allowable revenue and accounts receivable are interlinked, and only takes into account on the group allowable revenue.

Net working capital (R’ millions)		RUSTENBURG			
		2014	2014	2014	2014
	Formula	Company A	Company B	Company C	Summary
Inventory (un-pumpable)	Litres x BFP	[redacted]	[redacted]	[redacted]	[redacted]
Receivables	AR x 30/365	[redacted]	[redacted]	[redacted]	[redacted]
Operating Cash	Opex x 45/365	[redacted]	[redacted]	[redacted]	[redacted]
Les Payables	(Opex x 45/365)	[redacted]	[redacted]	[redacted]	[redacted]
Total Working Capital	w	[redacted]	[redacted]	[redacted]	[redacted]
		2015	2015	2015	2015
	Formula	Company A	Company B	Company C	Summary
Inventory (un-pumpable)	Litres x BFP	[redacted]	[redacted]	[redacted]	[redacted]
Receivables	AR x 30/365	[redacted]	[redacted]	[redacted]	[redacted]
Operating Cash	Opex x 45/365	[redacted]	[redacted]	[redacted]	[redacted]
Les Payables	(Opex x 45/365)	[redacted]	[redacted]	[redacted]	[redacted]
		-			-
Total Working Capital	w	[redacted]	[redacted]	[redacted]	[redacted]

Table 8: Net working capital: Rustenburg Facility: 2014 & 2015

7. Un-pumpables are calculated based on the un-pumpable volume to make sure the facility is operating at a safe capacity. This is then calculated per cost at the BFP at 1 January 2014 at the tariff start date based on information obtained from the Dept. of Energy website See table below for a detailed calculation.

Un-pumpables		RUSTENBURG		
		2014	2014	2014
	Formula	Litres (Millions)	BFP (Cents)	Summary (R'millions)
Diesel .05%				
Diesel .005%				
LRP/ULP 93				
ULP 95				
IK				
Total				
		2015	2015	2015
		Litres (Millions)	BFP (Cents)	Summary (R'millions)
Diesel .05%				
Diesel .005%				
LRP/ULP 93				
ULP 95				
IK				
Total				

Table 9: Un-pumpable: Rustenburg Facility 2014 & 2015

6.3.6 Deferred tax (dtax)

1. The notional tax method was selected, which led to the timing difference of depreciation and wear and tear allowances and an addition of a deferred tax liability to the Regulatory Asset Base (RAB).

2. By applying the same principles as the NERSA model (Tariff Methodology model to prove correctness, 2011), Engen was then able to calculate the deferred tax. Refer to section 6.2 for the final cumulative amount deducted from the RAB and the tables below for a detailed calculation per facility for the tariff period under review:

Deferred tax calculation (R' millions)		RUSTENBURG			
		2014	2014	2014	2014
	Formula	Company A	Company B	Company C	Summary
Accumulated Wear and tear	T				
Accumulated Depreciation	D				
Timing Difference	TD				
Deferred Tax – Asset/(Liability)	DT				

		2015	2015	2015	2015
		Company A	Company B	Company C	Summary
Accumulated Wear and tear	T	[redacted]	[redacted]	[redacted]	[redacted]
Accumulated Depreciation	D	[redacted]	[redacted]	[redacted]	[redacted]
Timing Difference	TD	[redacted]	[redacted]	[redacted]	[redacted]
Deferred Tax – Asset/(Liability)	DT	[redacted]	[redacted]	[redacted]	[redacted]

Table 10: Deferred Tax: Rustenburg Facility: 2014 & 2015

3. Any deferred tax arising from accelerated wear and tear allowances was treated as neither equity nor debt. (ie deferred tax assets)

4. Deferred tax accumulated depreciation was based on the accounting life of the assets.

6.4 Weighted Average Cost of Capital (WACC)

1. The following formula was used to determine the WACC based on the optimal capital structure of the licensed activity:

$$WACC = \left[\left(\frac{Eq}{Dt+Eq}\right)*Ke\right]+\left[\left(\frac{Dt}{Dt+Eq}\right)*Kd\right]$$

Where:

Eq = Shareholders' equity

Dt = Qualifying Interest bearing debt to fund the RAB

Ke = Post-tax, real cost of equity derived from the capital asset pricing model (CAPM)
Refer 6.4.1

Kd = Post-tax, real cost of debt
Refer 6.4.2

2. Deferred tax was excluded from the capital structure for the purposes of this calculation.

3. In determining the appropriate debt to equity ratio, Engen determined a debt equity ratio that would reflect all joint venture holders' cost of investment in the storage facility. For All the joint venture entities, namely Company A and Company B and Company C, company percentages are taken into account for debt and equity to calculate the debt equity ratio. Weighting based on the JV share is applied for this joint venture facility.. See calculation below:

DEBT:EQUITY PERCENTAGES CONSOLIDATED BASED ON JV COST SHARE		RUSTENBURG			
		2014	2014	2014	2014
	Formula	Company A	Company B	Company C	Summary
Debt ratio	d/(e +d)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Equity Ratio	e/(e+d)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Total Debt Equity		[redacted]%	[redacted]%	[redacted]%	[redacted]%
	JV COST SHARE	**33.33%**	**33.33%**	**33.33%**	100%
Gearing	d/e	[redacted]%	[redacted]%	[redacted]%	[redacted]%
		2015	**2015**	**2015**	**2015**
		Company A	**Company B**	**Company C**	**Summary**
Debt ratio	d/(e +d)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Equity Ratio	e/(e+d)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Total Debt Equity		[redacted]%	[redacted]%	[redacted]%	[redacted]%
	JV COST SHARE	**33.33%**	**33.33%**	**33.33%**	100%
Gearing	d/e	[redacted]%	[redacted]%	[redacted]%	[redacted]%

Table 11: Debt: Equity ratio: Rustenburg Facility: 2014 & 2015

4. The joint venture equity arrangement for this facility is 50:25:25.

5. Debt % was calculated as per the NERSA prescriber formula: $\frac{Proxy\ Debt}{(Proxy\ Equity + Proxy\ Debt)}$

6. The gearing ratio was calculated using the following formula: $\frac{Total\ Debt}{Total\ Equity}$

7. [redacted] Section 5.5 in the (Tariff methodology for the approval of tariffs for petroleum loading facilities and petroleum storage facilities, approved 31 March 2011).

8. In the tariff methodology for the setting of pipeline tariffs Version 6, paragraph 5.1.1 note ii, that equity is calculated as RAB minus Debt (RAB – dt). Due to the fact that this facility is not operated as a separate business, this was not possible. Total company percentages were used.

9. Refer to the tables below as well as the Allowable Revenue tables for the final WACC calculation.

Weighted Average cost of Capital		RUSTENBURG			
		2014	2014	2014	2014
	Formula	Company A	Company B	Company C	Summary
Cost of Equity	[(Rf+CRA) + (β * EMPR) + SSP + a] * (1 +LP)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Cost of Debt	$\frac{1+[Kdpre\text{-}tax,nom*(1-t)]}{1+CPIf}-1$	0.40%	0.40%	0.40%	0.40%
Equity Percentage	e/(d+e)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Debt Percentage	d/(d+e)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
JV weight allocation		33.3%	33.3%	33.3%	100%
WACC	[Ke * (e/(d+e))] + [Kd * (d/d+e))]	[redacted]%	[redacted]%	[redacted]%	33.33%
		2015	2015	2015	2015
		Company A	Company B	Company C	Summary
Cost of Equity	[(Rf+CRA) + (β * EMPR) + SSP + a] * (1 +LP)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Cost of Debt	$\frac{1+[Kdpre\text{-}tax,nom*(1-t)]}{1+CPIf}-1$	0.40%	0.40%	0.40%	0.40%
Equity Percentage	e/(d+e)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Debt Percentage	d/(d+e)	[redacted]%	[redacted]%	[redacted]%	[redacted]%
JV weight allocation		33.33%	33.33%	33.33%	100%
WACC	[Ke * (e/(d+e))] + [Kd * (d/d+e))]	[redacted]%	[redacted]%	[redacted]%	[redacted]%

Table 12: WACC: Rustenburg Facility: 2014 & 2015

6.4.1 Cost of equity (Ke)

1. The cost of equity capital was determined according to the capital asset pricing model (CAPM), in nominal terms, as described below, by applying the following formula:

Ke = [(Rf + CRA) + MRP * β) + SSP + α] * (1+ LP)

Where:

Ke = Post-tax, real cost of equity

Rf = Real risk free rate of interest, post tax, real

Engen applied the NERSA data as provided in the workbook (Economic data on MRP, December 2012; NERSA, April 2014). The workbook date.

The date used for the risk free formula as prescribed by the NERSA methodology is December 2012. Additional data for 2015 on the Rf used was the Economic Data on MRP (NERSA, April 2014)

CRA Country Risk Adjustment

All the joint venture storage facility forms part of South African assets and therefore no country risk adjustment were included in the Ke calculation.

MRP = **Market risk premium, Post-tax, Real**

The NERSA data used was obtained from the NERSA website. This was the real post tax market risk premium for the preceding 300 months before the tariff period under review, Tariff period starting 1 January 2014, as well as for the 1 January 2015 tariff period.

The date used in the NERSA spread sheet is **December 2012** for **2014** tariff year and **December 2013** for the **2015** tariff year

β '**Beta'** is the systematic risk parameter for regulated entities providing pipeline, storage and loading facility services.

Engen obtained the beta as proposed for gearing levels in the NERSA guide (Guidelines for annual assessment of storage and loading facilities tariff applications, Version: 9 JULY 2012).

Unlevered beta was used in this calculation

SSP = **Small Stock Premium**

[redacted]

α '**Alpha'** is the project specific risk

[redacted].

LP = **Liquidity Premium**

Liquidity premium is utilised to accommodate the fact that a facility is not a liquid asset that is easily converted to cash. Engen utilised a [redacted].

1. Using the formula the cost of equity was calculated as follows:

Cost of Equity (ke)		**RUSTENBURG**			
		2013	**2014**	**2014**	**2014**
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
SA risk free rate	($Rf_{post\ tax,\ real}$)	4.53%	4.53%	4.53%	4.53%
Country Risk adjustment	CRA	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Beta	β	[redacted]	[redacted]	[redacted]	[redacted]
Equity market risk premium	EMRP	6.11%	6.11%	6.11%	000%
Small Stock Premium	SSP	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Alpha	α	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Liquidity Risk Premium	LP	[redacted]%	[redacted]%	[redacted]%	[redacted]%
[(Rf+CRA) + (β * EMPR) + SSP + a * (LP+1)	Ke	[redacted]%	[redacted]%	[redacted]%	[redacted]%

		2015	2015	2015	2015
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
SA risk free rate	($Rf_{post\ tax,\ real}$)	4.11%	4.11%	4.11%	4.11%
Country Risk adjustment	CRA	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Beta	β	[redacted]	[redacted]	[redacted]	[redacted]
Equity market risk premium	EMRP	7.04%	7.04%	7.04%	7.04%
Small Stock Premium	SSP	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Alpha	α	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Liquidity Risk Premium	LP	[redacted]%	[redacted]%	[redacted]%	[redacted]%
[(Rf+CRA) + (β * EMPR) + SSP + a * (LP+1)	Ke	[redacted]%	[redacted]%	[redacted]%	[redacted]%

Table 13: Cost of Equity: Rustenburg Facility: 2014 & 2015

6.4.2 Cost of debt (Kd)

1. The cost of debt used must be after tax, real values determined as follows:

Kd posy-tax,real = $\frac{1+[Kdpre-tax,nom*(1-t)]}{1+CPI}$ -1

Where:

Kd pre-tax,nominal = Projected cost of debt, pre-tax, nominal, for the tariff Period under review Engen deemed a prime rate to be appropriate for its cost of debt calculation. This is in line with the Rustenburg facilities actual cost of incurring debt. Company specific actual debt allocation would not be useful in this exercise.

CPIf Consumer Price Index (as per NERSA document (Source:BER) 12 months prior to tariff year)

t = South African company tax rate of 28%

2. Using the formula Engen calculated the Cost of equity as follows:

Cost of Debt (kd)		**RUSTENBURG**			
		2014	**2014**	**2014**	**2014**
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Pre tax cost of debt	Kd	8.5%	8.5%	8.5%	8.5%
Forcast CPI rate	CPIf	5.70%	5.70%	5.70%	5.70%
Tax rate	t	28%	28%	28%	28%
Real post tax cost of debt	Kdpost - tax,nominal = (1+ [Kdpre − tax,nom* (1- t)] / (1+CPIf)) - 1	**0.40%**	**0.40%**	**0.40%**	**0.40%**
		2015	**2015**	**2015**	**2015**

	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Pre tax cost of debt	Kd	8.50%	8.50%	8.50%	8.50%
Forecast CPI rate	CPIf	5.70%	5.70%	5.70%	5.70%
Tax rate	t	28%	28%	28%	28%
Real post tax cost of debt	Kdpost - tax,nominal = (1+ [Kdpre − tax,nom* (1- t)] / (1+CPIf)) - 1	0.40%	0.40%	0.40%	0.40%

Table 14: Cost of Debt: Rustenburg Facility: 2014 & 2015

4. Engen made the assumption that on average debt was acquired at the prime lending rate. The CPI forecast data was obtained from NERSA website, named CPI forecast to be applied by NERSA in tariff decisions, CPI 12 months prior to commencement 1 January 2014 and 1 January 2015.

6.5 Expenses – Operating and Maintenance (E)

1. Cost are shared on a 33.33:33.33:33.33 basis. This is done practically by invoicing. Engen as the operator will ensure smooth operation of the facility and invoice Total and Chevron on an on-going basis. Should one party utilise more than its cost share, based on the volumes throughput, the benefitting partner will pay the depreciation cost of the other partner for the use of their entitlement.

2. Operating expenses taken into account in the joint venture tariff application are therefore individually calculated for each entity and combined to form the Operating and maintenance expenses of the Rustenburg joint venture storage facility. This is done to ensure that both direct and indirect expenses of the partners are taken into account.

3. As explained above the operating and maintenance expenses are first calculated separately and then consolidated. This is outlined separately below:

6.5.1 Chevron Operational and Maintenance expense (E)

6.5.1.1 Direct Expenses

1. Operating expenditure comprises of the forecasted depot expenditure and allocated costs. Allocated costs compromises of local and regional operations management support costs plus service support costs that can be attributed to storage and handling activities.

6.5.1.2 Indirect Expenses

1. Indirect costs are based on an allocation methodology across all terminals. These are costs for regional and international head office costs sand allocated on a percentage based on estimated man hours spent on storage and handling.

2. The CHEVRON forecasted **storage and handling allocated** costs for has been apportioned across the depots basis the projected throughput volume for the period under review illustrated as follows:

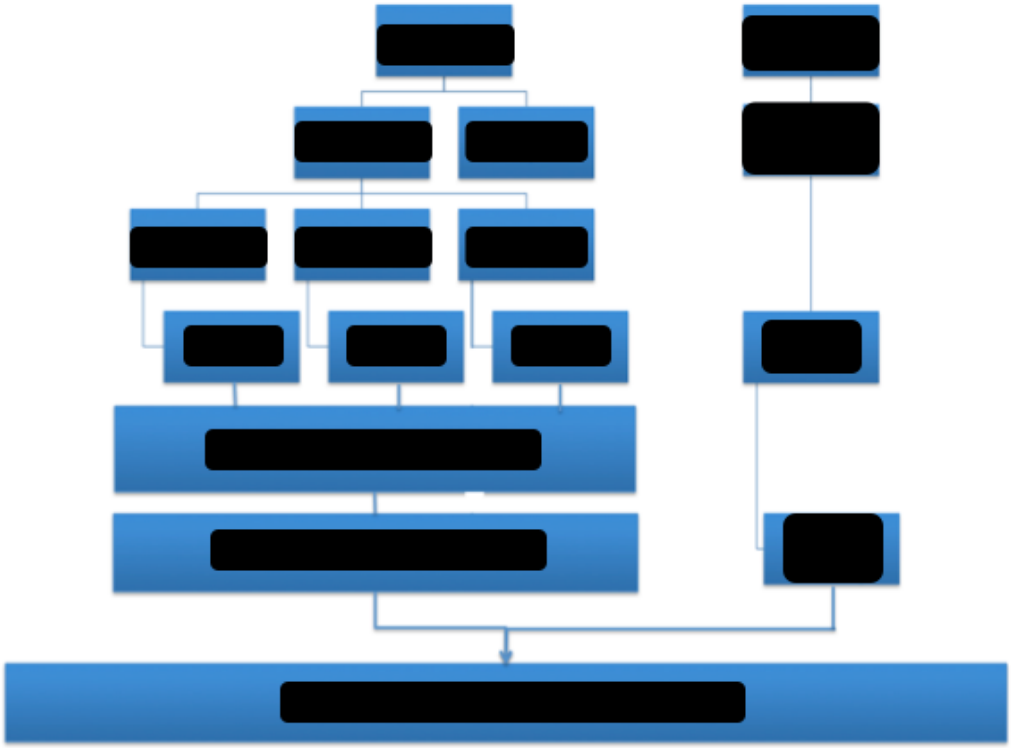

Figure 2: Chevron Indirect Cost Structure: Rustenburg: 2014 & 2015

6.5.2 ENGEN Operational and maintenance expenses (E)

1. Expenses include only those operating expenses required for the efficient operation and maintenance required in relation to storage and loading of in scope license facility.

6.5.2.1 Direct Expenses

1. These cost are incurred on site of which the largest portion is Salaries and related expenses.

6.5.2.2 Indirect Expenses

1. The Engen process for allocating Support costs to Facilities follows a number of steps, which build up allocated costs from different areas of the business.

2. **Level 1**: Engen Support Divisions costs (includes CEO's office, HSE, Corporate Planning, ERA and Special Projects) are allocated to the different Engen Divisions. Cost drivers include an estimate of time spent and Establishment Headcount. In ESM, these costs are recorded in the Corporate Allocations Profit centre.

3. **Level 2**: ESM Support Department Profit Centre costs (i.e. HR, Finance, Credit etc.) are allocated to Support Profit centres within the ESM Streams (Retail, Commercial, Lubes, Chemicals

and Distribution). The cost drivers used are the appropriate ones as agreed with each stream. These are:

- Establishment headcount (which includes vacancies)
- Estimate of time spent
- Number of customers
- Number of call center interactions

4. **Level 3:** Support departments within STO (Supply, Trade and Optimisation) are allocated to relevant Departments within the other Divisions. These allocations are based on the benefits received.

5. **Level 4:** Third Party Marketing and Lubes Support costs are allocated to the relevant Commercial and Lubes facilities respectively, regardless of whether they are regulated or non-regulated. The allocations are based on the benefits received from the Support Profit centers.

6. **Level 5:** The costs allocated to the Storage Profit Centre are the fully allocated across all the facilities regardless of whether they are regulated or non-regulated. All of the above results in the Profit Centre for each facility containing an accurate reflection of both the Direct and Allocated costs.

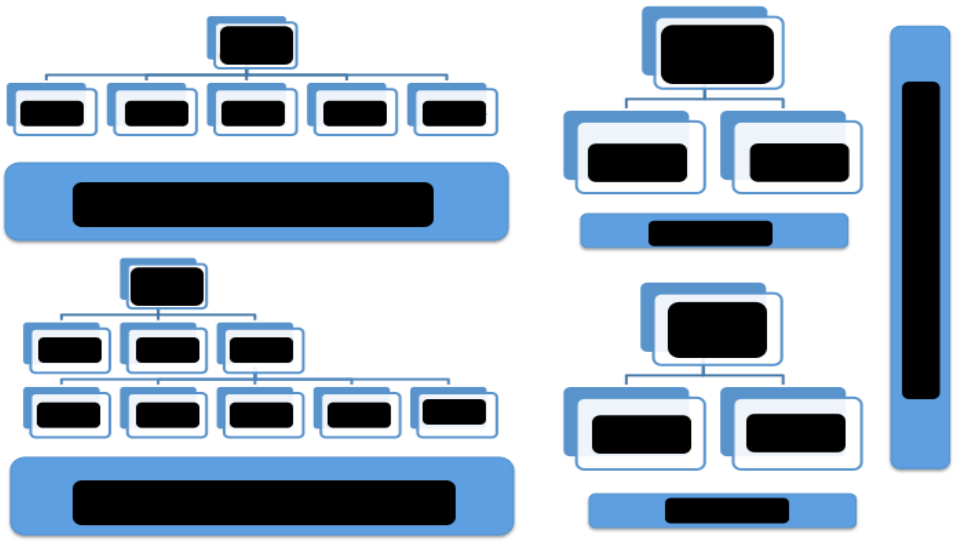

Figure 3: Engen Indirect Cost Structure: Rustenburg: 2014 & 2015

6.5.3 BP SA Operational and maintenance expenses (E)

1. Except for the cumulative annual S&H fee raised on BP by Engen no direct or indirect costs associated with Storage and Handling were incurred at Rustenburg depot in 2013. BP SA decision was to stay consistent and only expense the invoiced expenses for this facility

6.5.3.1 DIRECT EXPENSES

Direct expense categories relate to the following expense types:

- Tanks: Throughput fees (S&H)
- FVC A&O LO Depots North
- Storage & Handling - Bulk Products
- S&H Fees OOC

6.5.3.2 Indirect Expenses

1. No indirect costs associated with storage and handling were allocated to this facility for the 2014 and 2015 tariff period.

2. An illustration of the BP SA indirect cost allocation methodology can be provided upon request.

6.6 Joint Venture Operational and Maintenance expenses (E)

1. In the tables below the expenses have already been consolidated.

Operational Expenses (R' millions)		RUSTENBURG			
		2014	2014	2014	2014
	Formula	Company A	Company B	Company C	Summary
Operational expenses (Direct Expense)	Opex	[redacted]	[redacted]	[redacted]	[redacted]
Corporate Costs (Indirect Expenses)	Corpex	[redacted]	[redacted]	[redacted]	[redacted]
Land rehabilitation cost	Land-Rehab	[redacted]	[redacted]	[redacted]	[redacted]
Total Opex	(E)	[redacted]	[redacted]	[redacted]	[redacted]
		2015	2015	2015	2015
		Company A	Company B	Company C	Summary
Operational expenses (Direct Expense)	Opex	[redacted]	[redacted]	[redacted]	[redacted]
Corporate Costs (Indirect Expenses)	Corpex	[redacted]	[redacted]	[redacted]	[redacted]
Land rehabilitation cost	Land-Rehab	[redacted]	[redacted]	[redacted]	[redacted]
Total Opex	(E)	[redacted]	[redacted]	[redacted]	[redacted]

Table 15: Operational Expenses: Rustenburg Facility: 2014 & 2015

6.7 Depreciation and Amortisation of Inflation Write-up (D)

1. The depreciation amount was calculated on a straight-line basis over the service life of each of the facilities for the tariff period under review and is included in the allowable revenue.

2. The depreciation rate was based on the estimated service life of plant, as developed by a study of all the JV company's history and experience (taking into account all relevant factors including variations in use, increasing obsolescence or inadequacy) and such engineering, economic or other depreciation studies and other information as may be available with respect to future operating conditions.

3. Refer to attached workbooks (refer section 4 Introduction) for detailed depreciation rates used for the licensed facility. The method and basis used was as per NERSA calculation sheet (NERSA, Tariff Methodology model to prove correctness, 2011).

Depreciation Expenses (R' millions)		**RUSTENBURG**			
		2014	**2014**	**2014**	**2014**
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Historic Depreciation	D	[redacted]	[redacted]	[redacted]	[redacted]
Amortisation of Write up	D	[redacted]	[redacted]	[redacted]	[redacted]
Planned Capex	D	[redacted]	[redacted]	[redacted]	[redacted]
Total Depreciation	(D)	[redacted]	[redacted]	[redacted]	[redacted]
		2015	**2015**	**2015**	**2015**
		Company A	**Company B**	**Company C**	**Summary**
Historic Depreciation	D	[redacted]	[redacted]	[redacted]	[redacted]
Amortisation of Write up	D	[redacted]	[redacted]	[redacted]	[redacted]
Planned Capex	D	[redacted]	[redacted]	[redacted]	[redacted]
Total Depreciation	(D)	[redacted]	[redacted]	[redacted]	[redacted]

Table 16: Total Depreciation: Rustenburg Facility: 2014 & 2015

6.8 Tax Expense (T)

1. Engen elected the use of notional tax for this facility. This option selected will be used in future for the Rustenburg facility licensed assets. Notional tax refers to a licensee's estimate notional tax expense with respect to the regulated activity for the tariff period under review. As per the (Tariff Methodology model to prove correctness, 2011) calculation, the tax shield was used in the tax calculation. Applying the following formula performs the calculation:

Tax = {(NRBTA) / (1-t)*t

Where:

NRBTA = (RAB*WACC) + E + D(historic & write up) + F ±C} - {E + D(historic)}
(Net revenue before tax allowance)

t = Prevailing corporate tax rate

The tax expense is the estimated tax expense for the tariff period under review, at a corporate tax rate of **28%**. This Formula used, as per the NERSA Tariff Methodology, Section 7.

2. Refer to the tables below for the notional tax calculation per licensed facility for the tariff period under review. Tax penalties and interest were not taken into account in the tax expense calculation.

Notional Tax (R' millions)		RUSTENBURG			
		2014	2014	2014	2014
	Formula	**Company A**	**Company B**	**Company C**	**Summary**
Return on Asset	RAB x WACC	[redacted]	[redacted]	[redacted]	[redacted]
Expenses	E	[redacted]	[redacted]	[redacted]	[redacted]
Depreciation (historic)	$D_{historic}$	[redacted]	[redacted]	[redacted]	[redacted]
Depreciation (write-up)	$D_{write-up}$	[redacted]	[redacted]	[redacted]	[redacted]
Depreciation (planned)	$D_{planned}$	[redacted]	[redacted]	[redacted]	[redacted]
Clawback adjustment	C	-	-	-	-
Net revenue before tax allowance (NRBTA)	(RAB*WACC) + E + D(historic & write up) + F ±C} - {E + D(historic)	[redacted]	[redacted]	[redacted]	[redacted]
Tax Expense	**T**	[redacted]	[redacted]	[redacted]	[redacted]
		2015	**2015**	**2015**	**2015**
		Company A	**Company B**	**Company C**	**Summary**
Return on Asset	RAB x WACC	[redacted]	[redacted]	[redacted]	[redacted]
Expenses	E	[redacted]	[redacted]	[redacted]	[redacted]
Depreciation (historic)	$D_{historic}$	[redacted]	[redacted]	[redacted]	[redacted]
Depreciation (write-up)	$D_{write-up}$	[redacted]	[redacted]	[redacted]	[redacted]
Depreciation (planned)	$D_{planned}$	[redacted]	[redacted]	[redacted]	[redacted]
Clawback adjustment	C	-	-	-	-
Net revenue before tax allowance (NRBTA)	(RAB*WACC) + E + D(historic & write up) + F ±C} - {E + D(historic)	[redacted]	[redacted]	[redacted]	[redacted]
Tax Expense	**T**	[redacted]	[redacted]	[redacted]	[redacted]

Table 17: Notional Tax: Rustenburg Facility: 2014 & 2015

6.9 Tariff Design and Tariff Structures

1. The tariff designs and structures were deemed appropriate by Engen to the nature of a licensed facility included in this tariff application.

6.10 Review and Modification of the Tariff Methodology

1. Subject to regulatory approval, Engen will conduct a review of the Methodology every 3 years to ensure that the contents of the Methodology reflect the regulatory circumstances existing at the time of the review. Engen also recognizes that special circumstances may arise that may necessitate changes to be effected, perhaps sooner than the envisaged 3 years formal review cycle. This provision for a review after 3 years would therefore not preclude on-going incorporation by Engen of justifiable

changes that are considered necessary to immediately capture clarity, transparency and regulatory efficiency benefits.

7 References

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NERSA. (2011). Tariff Methodology model to prove correctness.

PWC. (2012). *An African Perspective: Valuation methodology survey.* Survey.

Petroleum pipelines act, 2003 (ACT 60 of 2003)

Petroleum pipelines act rules 2009

Petroleum pipelines act regulations (Government Notice R342 GG 30905 of 4 April 2008)

Regulatory reporting manuals (RRM) Volume One and Volume Four (Gazetted) on 10 September 2008

(include newest versions of FAQ and Methodology,)

Tariff Summary: Rustenburg

	Application 2014	Energy Regulator Decision	Application 2015	Energy Regulator Decision
	R million / % / No.		R million / % / No.	
Regulatory Asset Base (RAB = {V-d} ± dtax + w)				
Value of asset base (V-d) - Plant in Service (PPE)	[redacted]		[redacted]	-
Deferred tax (dtax)				
Net working capital (w)	[redacted]		[redacted]	
Total Regulatory Asset Base (RAB)	[redacted]		[redacted]	**Total**
(WACCpost-tax,real)				
Debt ratio (d:[e+d])	[redacted]		[redacted]	**%**
Cost of debt (Kdpre-tax,nominal)	8.5%		8.5%	%
CPI forward looking (CPIf)	5.70%		5.70%	%
Cost of debt (Kdpost-tax,real)[1]	**0.40%**		**0.40%**	**%**
Riskfree rate (Rfpre-tax,real)	4.53%		4.11%	%
Market Risk Premium (MRPpost-tax,real)	6.11%		7.04%	%
Beta (β)	[redacted]		[redacted]	-
Cost of Equity (Kepost tax,real) [2]	[redacted]		[redacted]	**%**
Calculation of Allowable revenue (AR)				**Totals**
Return on Equity Funding	[redacted]		[redacted]	**-**
Return on Debt Funding	[redacted]		[redacted]	-
Return (RAB x WACC)	[redacted]		[redacted]	-
Operational Expenses (E)	[redacted]		[redacted]	Totals
Operational Expenditure	[redacted]		[redacted]	-
Provision for Land Rehabilitation costs	[redacted]		[redacted]	-
Corporate Overhead Costs	[redacted]		[redacted]	-
Depreciation (D)	[redacted]		[redacted]	(-)
Clawback Adjustments (C)	[redacted]		[redacted]	(-)
Tax Allowance (T)	[redacted]		[redacted]	**-**
Allowable Revenue(AR)=(RAB x WACC)+E+D+F±C+T	[redacted]		[redacted]	Totals
Volume Throughput (litres)	**4.681**		**4.301**	
Tariff (cent per litre)				