

**CONFIDENTIAL**

**PETROLEUM TRANSFER PIPELINE TARIFF APPLICATION FOR LICENSE NO:  
PPL.p.F3/97/2010**

**PETROLEUM TRANSFER PIPELINE TARIFF APPLICATION OF SASOL OIL (PTY)  
LTD. COAL TO LIQUIDS REFINERY AT SECUNDA TO THE NATIONAL  
PETROLEUM REFINERS REFINERY (NATREF) AT SASOLBURG FOR THE  
FINANCIAL YEAR ENDING 30 JUNE 2016**

26 February 2015

**LIST OF ACRONYMS**

- |              |   |  |
|--------------|---|--|
| 1. BFP       | – | Basic Fuel Price   |
| 2. CPI       | – | Consumer Price Index                                     |
| 3. MIRTHA    | – | Minimum Information Requirements for Tariff Applications |
| 4. RAB       | – | Regulatory Asset Base                                    |
| 5. RRM       | – | Regulatory Reporting Manual                              |
| 6. WACC      | – | Weighted Average Cost of Capital                         |
| 7. CAPM      | – | Capital Asset Pricing Model                              |
| 8. EMRP      | – | Equity Market Risk Premium                               |
| 9. NRV       | – | Nett Replacement Value                                   |
| 10. MOT      | – | Method of transport                                      |
| 11. OUTBOUND | – | Depot facilities and secondary storage and distribution  |
| 12. NATREF   | – | National Petroleum Refiners of South Africa              |

**PREAMBLE**

SASOL Oil (Pty) Ltd (Registration number: 1981/007622/07, herein referred to as Sasol Oil) owns the petroleum pipeline facility and auxiliary infrastructure for the operation of a petroleum pipeline. The pipeline operates from the Sasol Oil (Pty) Ltd Coal-to-Liquids refinery at Secunda to the National Petroleum Refiners of South Africa (Pty) Ltd (Natref, registration number 1967/012994/07) refinery in Sasolburg.

On the 27 January 2011, the National Energy Regulator of South Africa (Nersa) granted the license PPL.p.F3/97/2010 to Sasol Oil to operate the pipeline which will allow the transfer of components from Sasol's Secunda refinery to Sasolburg Natref refinery.

The pipeline is dedicated to transfer the following fuel components:

| Component                            |
|--------------------------------------|
| Diesel blending components           |
| Synthetic jet fuel blending material |
| Petrol blending components           |

The pipeline has a dedicated pump station which consists of a set of pumps located in the primary area of the Secunda refinery. There are currently no booster pumps planned along the pipeline route. Booster pumps are not considered unless there is a requirement to increase the flow rate in future.

Components transferred from Secunda refinery will be blended together with the Natref components to produce final petrol, diesel and jet fuel for distribution via the Transnet Pipeline network.

The pipeline facility consists of the following:

- An inlet flange at the Sasol Oil Tank Farm in Secunda
- 10" diameter, 145 km long multi-product pipeline
- A delivery flange at the tank farm of the Natref refinery
- A pump station located at the Sasol Oil Tank Farm in Secunda
- Auxiliary equipment, including control and communication systems to enable the transportation of petroleum products from Secunda to Sasolburg at a maximum design volume throughput of 270m<sup>3</sup>/hr and a design pressure of 100 bar gauge and an operating pressure of 80 bar gauge.

Table below summarizes the key characteristics of the pipelines:

| <b>Characteristic</b> | <b>Unit</b>       | <b>Specification</b> |
|-----------------------|-------------------|----------------------|
| Diameter              | inch              | 10                   |
| Estimated length      | km                | 145                  |
| Design Pressure       | barg              | 100                  |
| Operating Pressure    | barg              | 80                   |
| Desired flow rate     | m <sup>3</sup> /h | 270                  |

### **Percentage of capacity usage**

Currently the capacity is fully utilised by Sasol Oil on a 100% basis, as the pipeline can only be used for the transfer of components for blending between Secunda and Natref. The possibility of third parties access to the pipeline is limited as there is no interconnection with any other mainline fuel or component line.

### **Third party access**

This document is not intended as a guideline on how third party access will be handled for the Pipeline facilities, but third party access is described to help provide background for the tariff application.

Section 28(1) of the Petroleum Pipelines Act, requires the National Energy Regulator to set tariffs for a pipeline facility.

## TARIFF METHODOLOGY

The tariff methodology as proposed by the Energy Regulator:

$$\text{Allowable Revenue (AR)} = (\text{RAB} \times \text{WACC}) + \text{D} + \text{E} + \text{F} +/- \text{C} + \text{T}$$

Where

**AR** = Allowable Revenue

**RAB** = Regulatory Asset Base

**WACC** = Weighted average cost of capital

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

**E** = Expenses: maintenance and operating expenses for the tariff

**F** = Approved revenue addition to meet debt obligations for the tariff period under review

**C** = Claw back adjustment (to correct differences between actual and Forecasts in formulae elements as well as efficiency gains and volume differences) from a preceding tariff period

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

### Regulatory Asset Base (RAB)

The RAB is calculated using the Trended Original Cost (TOC) method as prescribed by NERSA. The actual costs of the assets have been trended as per the methodology prescribed using their expected useful lives.

No assets under construction have been included in the asset base.

| <b>Summary Regulatory Asset Base</b> | <b>R'million</b> | <b>R'million</b> |
|--------------------------------------|------------------|------------------|
|                                      | <b>2 016</b>     | <b>2 014</b>     |
| Assets                               |                  |                  |
| Working Capital                      |                  |                  |
| Deferred tax                         |                  |                  |
| Tax on the deferred tax              |                  |                  |

### Net working capital:

Net working capital = inventory + receivables + operating cash – trade payables. Working capital was calculated for the depot. Inventory includes line fill stock at BFP. Accounts receivable is based on 1 month of allowable revenue. Accounts payable is also based on 30 days payment terms. Operating cash has been calculated using a 45 day cycle expenses excluding depreciation and taxes.

| <b>Working capital</b> | <b>R'million</b> | <b>R'million</b> |
|------------------------|------------------|------------------|
|                        | <b>2 014</b>     | <b>2 016</b>     |
|                        | ACT              |                  |
| Inventory              |                  |                  |
| Receivables            |                  |                  |
| Operating Cash         |                  |                  |
| Minimum cash balance   |                  |                  |
| Less Trade payables    |                  |                  |

### Weighted average cost of capital (WACC)

The Nersa WACC methodology is as follows:

$$\text{WACC} = K_e \cdot (E / Dt + E) + K_d \cdot (Dt / Dt + E)$$

Where:

- $K_e$  = The cost of equity derived from the Capital Asset Pricing Model
- $K_d$  = The cost of debt
- $E$  = Equity
- $Dt$  = Debt

### Sasol Oil WACC overview FY16



### CAPM – Estimating Risk-Free Rate

NERSA published real risk-free rates for July 2014 which was applied in the tariff calculation for FY16 as it represents the most recent information available at the time of this submission.

|                     | Previous submission FY15 | Current submission FY16 |
|---------------------|--------------------------|-------------------------|
| Real risk free rate | 4,44%                    | 4,09%                   |

### CAPM – Estimating Beta

The table provided by NERSA pertaining to FY16 indicating levered beta values at various levels of gearing was used. Sasol Oil's budgeted gearing for FY16 was applied, resulting in a beta of [REDACTED] at a gearing of [REDACTED]

|             | Previous submission<br>FY15 | Current submission<br>FY16 |
|-------------|-----------------------------|----------------------------|
| Equity Beta |                             |                            |

### EMRP – Estimating Equity Market Risk Premium

Sasol is of the view that 5.20% is the most appropriate return equity investors expect in light of the NERSA published data.

Furthermore this supports the methodology recommended by NERSA in their published guidelines.

|                            | Previous submission<br>FY15 | Current submission<br>FY16 |
|----------------------------|-----------------------------|----------------------------|
| Equity market risk premium | 5,74%                       | 5,20%                      |

### Debt Premium + Gearing

As per the published guidelines;

The actual gearing pertaining to the regulated assets for the tariff period under review must be used, subject to NERSA finding it reasonable.

Sasol Oil's budgeted gearing for FY16 of [REDACTED] was used.

|                  | Previous submission<br>FY15 | Current submission<br>FY16 |
|------------------|-----------------------------|----------------------------|
| Equity weighting |                             |                            |
| Debt weighting   |                             |                            |
| Debt : Equity    |                             |                            |

### Real Cost of Debt

The budgeted costs of interest bearing debt for FY16 was applied which is the weighted average of;

- [REDACTED] weighting for long-term debt at 1% premium over 12 month JIBAR; and
- [REDACTED] weighting for short term debt at RSA prime borrowing rate less 2%

The lending rate increments have been fixed by Sasol Financing for FY16.

|                      | Previous submission<br>FY15 | Current submission<br>FY16 |
|----------------------|-----------------------------|----------------------------|
| Nominal cost of debt |                             |                            |
| SA Tax rate          | 28%                         | 28%                        |
| CPI                  | 5,70%                       | 5,60%                      |
| Real cost of debt    |                             |                            |

## WACC conclusion

|  |   |
|--|---|
| <b>Sasol Oil WACC FY16</b>               | <ul style="list-style-type: none"> <li>• A WACC of [REDACTED] was calculated for submission to NERSA for the FY16 tariff</li> </ul>                 |
| <b>Real after tax cost of debt</b>       | <ul style="list-style-type: none"> <li>• [REDACTED]</li> <li>• Actual budgeted real after tax cost of interest bearing debt to Sasol Oil</li> </ul> |
| <b>Beta (<math>\beta</math>)</b>         | <ul style="list-style-type: none"> <li>• [REDACTED]</li> <li>• As per NERSA guidelines at Sasol Oil's actual debt percentage</li> </ul>             |
| <b>Real Risk-free rate</b>               | <ul style="list-style-type: none"> <li>• 4,09%</li> <li>• As provided by NERSA</li> </ul>   |
| <b>Equity Market Risk Premium (EMRP)</b> | <ul style="list-style-type: none"> <li>• 5,20%</li> <li>• Based on data provided by NERSA</li> </ul>  |
| <b>Gearing</b>                           | <ul style="list-style-type: none"> <li>• [REDACTED]</li> <li>• Budgeted gearing level of Sasol Oil</li> </ul>                                       |
| <b>CPI</b>                               | <ul style="list-style-type: none"> <li>• 5,60%</li> <li>• As provided by NERSA for FY15</li> </ul>  |
| <b>Tax rate</b>                          | <ul style="list-style-type: none"> <li>• 28%</li> <li>• Official RSA corporate tax rate</li> </ul>  |

## WACC Calculation

|                        | Previous submission<br>FY15 | Current submission<br>FY16 |
|------------------------|-----------------------------|----------------------------|
| ZAR WACC               | [REDACTED]                  | [REDACTED]                 |
| Equity weighting       | [REDACTED]                  | [REDACTED]                 |
| Debt weighting         | [REDACTED]                  | [REDACTED]                 |
| CPI                    | 5,70%                       | 5,60%                      |
| Cost of Debt           | [REDACTED]                  | [REDACTED]                 |
| Real risk free rate    | 4,44%                       | 4,09%                      |
| RSA Corporate tax rate | 28%                         | 28%                        |
| Cost of Equity         | [REDACTED]                  | [REDACTED]                 |
| EMRP                   | 5,74%                       | 5,20%                      |
| Beta                   | [REDACTED]                  | [REDACTED]                 |



### Operational expenses (E)

All budgeted operational costs for the SNI pipeline are included in this tariff application. These include corporate costs and Sasol Group Services Costs.

The cost allocation manual has been applied to the support costs as per approval by NERSA. The provision for rehabilitation cost is not included, as Sasol Oil is assessing the impact of the requirement and will follow the required approval process with NERSA.

Below is the cost split as per the pipeline operation:

| COST AS PER DEPOT SUMMARY                    | R'million |         |
|--|-----------|---------|
|  | R 2 016   | R 2 014 |
| LINE OPERATIONAL COST                        |           |         |
| HEAD OFFICE CORPORATE COST                   |           |         |
| TECHNICAL ALLOCATION                         |           |         |
| <b>TOTAL EXPENSES FOR TARIFF CALCULATION</b> |           |         |

### Tax (T)

The corporate tax rate of 28% was used to calculate the tax expense on the allowable revenue.

### Depreciation (D)

Depreciation cost originates from the trended original cost (TOC) calculation as per the NERSA methodology.

### Claw back adjustment (C)

Claw back calculation for 2014 has been included in this tariff application.

**Tariff calculation:**

| SNI Pipeline - Tariff Calculations      |        |           |        |        |          |
|---|--------|-----------|--------|--------|----------|
| Allowable revenue (AR)                  |        | R'million |        |        |          |
| AR = (RAB x WACC) + D + E + F +/- C + T |        | 2 014     | 2 015  | 2 016  | 2014 ACT |
| RAB                                     | R Mill |           |        |        |          |
| WACC                                    |        |           |        |        |          |
| D                                       | R Mill |           |        |        |          |
| E                                       | R Mill |           |        |        |          |
| F                                       | R Mill |           |        |        |          |
| C                                       | R Mill |           |        |        |          |
| T                                       | R Mill |           |        |        |          |
| <b>Allowable revenue</b>                |        |           |        |        |          |
| RAB X WACC                              |        |           |        |        |          |
| D                                       | R Mill |           |        |        |          |
| E                                       | R Mill |           |        |        |          |
| F                                       | R Mill |           |        |        |          |
| C                                       | R Mill |           |        |        |          |
| T                                       | R Mill |           |        |        |          |
| Volumes to be pumped per annum          |        |           |        |        |          |
| Tariff                                  | R/m³   | 202.34    | 263.35 | 242.34 | 282.64   |
| Tariff                                  | c/l    | 20.23     | 26.33  | 24.23  | 28.26    |