DISCUSSION DOCUMENT ON SASOL GAS (PTY) LTD APPLICATION TO APPROVE THE TRADING MARGIN FOR THE PERIOD 2017 TO 2019

1. INTRODUCTION

1.1 This discussion document provides background information to the preliminary assessment of the trading margin application by Sasol Gas Limited ("Sasol Gas" or the Applicant) for the period 01 July 2017 to 30 June 2019. The application was published on the NERSA website.

1.2 Interested parties are invited to provide written comments to the Energy Regulator, which will be considered before the final decision is taken on the matter. The deadline for submitting comments is ==xxxxxxxx==.

2. APPLICABLE LAW

2.1 The legal basis for the National Energy Regulator of South Africa ("NERSA" or "the Energy Regulator") to regulate prices of piped-gas is derived from the National Energy Regulator Act, 2004 (Act No. 40 of 2004) ('the National Energy Regulator Act'), read with the Gas Act, 2001 (Act No. 48 of 2001) ('the Gas Act').

3. BACKGROUND

The Methodology to Approve Maximum Prices for Piped-Gas in South Africa (2011) In terms of section 4(g) of the Gas Act, the Energy Regulator must, as appropriate, in accordance with this Act regulate prices in terms of section 21(1)(p) in the prescribed manner.

3.2 Section 21(1) (p) of the Gas Act prescribes that the Energy Regulator may impose licence conditions within the following framework of requirements and limitations: 'maximum prices for distributors, reticulators and all classes of consumers must be approved by the Gas Regulator where there is inadequate competition as contemplated in Chapters 2 and 3 of the Competition Act, 1998 (Act No. 89 of 1998)'.

3.3 The essence of section 4(g), therefore, is that when the licensee holds a licence that contains a condition in terms of section 21(1)(p), then such licensee's

maximum prices must be approved by the Energy Regulator in the prescribed manner where there is inadequate competition.

3.4   Regulation 4 of the Piped Gas Regulations, 2007 (published under Government Notice No. R. 321 in *Gazette* No. 29792 on 20 April 2007) ("Piped Gas Regulations") dealing with the price regulation principles and procedures provides as follows under sub regulation (3) and (4), respectively –

   3.4.1   that the Energy Regulator must, when approving the maximum prices in accordance with section 21(1)(p) of the Act, *inter alia* be objective based on a systematic methodology applicable on a consistent and comparable basis; and

   3.4.2   that the maximum prices referred to in sub regulation (3) must enable the licensee to –

      (a)   recover all efficient and prudently incurred investment and operational costs; and

      (b)   make a profit commensurate with its risk.

3.5   In line with this particular requirement, the National Energy Regulator has developed the Methodology to Approve Maximum Prices of Piped-Gas in South Africa, 2011 ('the Maximum Pricing Methodology' or 'the Methodology'). The Methodology is available on the National Energy Regulator's website at www.nersa.org.za.

   A.   Determination of Inadequate Competition

3.6   Approving maximum prices and the use of the Methodology are contingent on the National Energy Regulator determining that 'there is inadequate competition as contemplated in Chapters 2 and 3 of the Competition Act, 1998 (Act No. 89 of 1998) ("Competition Act")'.

3.7   Therefore, for the National Energy Regulator to approve maximum prices of piped-gas, it must be of the view that there exist market conditions or market

features indicating inadequate competition in line with the provisions of Chapters 2 and 3 of the Competition Act.

3.8 The determination of inadequate competition contemplated in section 21(1) (p) of the Gas Act is made by the Energy Regulator outside of this methodology from time to time. The decision of the Energy Regulator that competition is inadequate was made by the Energy Regulator on 08 February 2012. Another determination that there is inadequate competition was made on 29 March 2016.

3.9 The Maximum Pricing Methodology also provides for the determination of a trading margin, which is referenced to the Tariff Guidelines.

B.   Relationship to the Tariff Guidelines

3.10 According to section 4(h) of the Gas Act, the Energy Regulator has a duty to '*monitor and approve, and if necessary regulate, transmission and storage tariffs and take appropriate actions when necessary to ensure that they are applied in a non-discriminatory manner as contemplated in section 22*'.

3.11 In order to implement this mandate, the National Energy Regulator developed the Guidelines for Monitoring and Approving Piped-Gas Transmission and Storage Tariffs in South Africa, 2009 ('the Tariff Guidelines'). The Tariff Guidelines are available on the National Energy Regulator's website at www.nersa.org.za.

3.12 Hence, the Tariff Guidelines give guidance on tariff-related activities, which are charges for gas services and which must be added to the piped-gas energy price(s).

C.   The Piped-Gas Regulations

3.13 The maximum price determination principles outlined in the Maximum Pricing Methodology, are further informed by the Piped-Gas Regulations.

3.14 Sub-regulation 4(3) prescribes that the Energy Regulator must, when approving the maximum price in accordance with Section 21(1)(p) of the Act:

a) be objective i.e. based on a systematic methodology applicable on a consistent and comparable basis;

b) be fair;

c) be non-discriminatory;

d) be transparent;

e) be predictable; and

f) include efficiency incentives.

3.15 Sub-regulation 4(4) prescribes that the maximum prices referred to in sub-regulation 4(3) must enable the licensee to:
a) recover all efficient and prudently incurred investment and operation costs; and

b) make a profit commensurate with risk.

3.16 Sub-regulation 4(6) then requires that, when gas is sold, the accompanying invoice must itemise the constituent elements of the total price reflected on the invoice, including at least the cost of gas, and transport tariffs and any other charges.

3.17 Annexure A of the Regulations provides the definition of the classes of customers as classified by their annual gas consumption in Gigajoules as follows:

CLASS	ANNUAL GAS CONSUMPTION		
Class 1	Less than 400 GJ pa		
Class 2	401 GJ pa	to	4 000 GJ pa
Class 3	4 001 GJ pa	to	40 000 GJ pa
Class 4	40 001 GJ pa	to	400000 GJ pa
Class 5	400 001 GJ pa	to	4 000 000 GJ pa
Class 6	> 4 000 000 GJ pa		

3.18 These legislative aspects, as prescribed by the Gas Act are essential in defining the scope and nature of the Maximum Pricing Methodology developed by the National Energy Regulator.

D.   Approving maximum prices of piped-gas

3.19 As the Maximum Pricing Methodology highlights, in approving maximum piped-gas prices:

- the National Energy Regulator will not set prices but will review maximum piped-gas price applications prepared by licensees or applicants;

- the National Energy Regulator may request licensees or applicants to amend maximum prices; and

- the National Energy Regulator may approve or decide not to approve maximum prices.

3.20 The process of piped-gas maximum prices application is as follows:

- The Energy Regulator has requested licensees or applicants to submit their maximum piped-gas price applications based on the Methodology approved by the Energy Regulator.

- To ensure consistency of applications and predictability of analysis of the applications, the National Energy Regulator has specified the following:

  a) prescribed sources of information that must be used for the input variables in the maximum price calculations;

  b) prescribed weights applied to energy price indicators; and

  c) the Methodology to determine trading margins.

- Applicants must provide information regarding the assumptions as well as the details of the calculation.

3.21 This application must:

- be provided on an annual basis, although applicants are allowed to apply for approval of maximum prices for a longer or shorter period; and

- indicate the manner and frequency of price adjustment to be approved by the Energy Regulator.

3.22 The Methodology further states that, 'NERSA will periodically conduct reviews of approved prices to assess the impact and to verify whether the prices comply with the requirements of the Act and the Regulations'.

4.1 Sasol Gas Limited (registration number 1964/006005/06) is wholly owned by Sasol Gas Holdings (Pty) Ltd (registration number 2000/013669/07), a limited liability company incorporated in terms of South African company law. Sasol Gas Holdings (Pty) Ltd is in turn a wholly owned subsidiary of Sasol Limited.

4.2 Sasol Gas is vertically integrated in the gas industry supply chain in South Africa, i.e. it is active in gas transmission, gas distribution and gas trading. Sasol Limited has also secured rights to natural gas from the Republic of Mozambique through a series of agreements with the Mozambican Government.

4.3 Sasol Gas trades;
- piped natural gas from the Mozambican gas fields, as well as
- piped methane-rich gas produced at Secunda.

4.4 This is Sasol Gas's trading margin application for various areas in which Sasol Gas is licensed to conduct trading activities. The number of licences and areas to which the trading margin applies to is listed in the trading margin application hereto attached as **Annexure B**. In summary the trading margin will apply to all areas where Sasol Gas has been issued with a trading licence.

4.5 In accordance with the Regulatory Reporting Manuals (RRM), Sasol Gas has unbundled its accounts into three licensed activities namely; trading, transmission and distribution. Thus cost allocation and reporting are done per licensed activity.

4.6 As at the date of the application, the applicant is supplying gas to traders and reticulators as well as end users. The applicant is applying for separate trading margins for the traders and reticulators and a separate trading margin for end users for the period 1 July 2017 to 30 June 2019.

5   SASOL GAS TRADING MARGIN APPLICATION On 12 May 2017, the Energy Regulator received a multi-year trading margin application from Sasol Gas Limited for the periods 01 July 2017 to 30 June 2018 and 01 July 2018 to 30 June 2019

5.2   The trading margin application is attached as **Annexure B** (*Annexure B – Sasol Gas Limited Trading margin application for the period 01 July 2017 to 30 June 2019*).

5.3   The first Sasol Gas trading margin was approved on 31 March 2013 for the periods 26 March 2014 to 30 June 2014 and 01 July 2014 to 30 June 2015. The subsequent and the currently approved trading margin was for the period 01 July 2015 to 30 June 2017.

5.4   Sasol Gas is applying for a trading margin for the period 1 July 2017 to June 2019.   The application is split into two periods aligned with the Sasol Gas financial years. In terms of the previous Sasol Gas applications for the Approval of Maximum GE Prices, NERSA approved a distinguishing feature that allowed Sasol Gas to apply a discount off the actual GE Price equivalent to ▮▮▮ of the prevailing trading margin for traders and reticulators. The objective of this distinguishing feature was to acknowledge that traders and reticulators are placed differently in the market to customers who purchase gas for their own consumption.

5.5   In the current application Sasol Gas is applying for different trading margin for traders and reticulators and end user customer. Sasol Gas used direct cost allocation and volumes to split to determine the applicable trading margins for traders/reticulators and end-user.

5.6   Sasol Gas further indicated that direct allocation of costs were used where the information was available and for all other elements volume was used as a driver for the allocation between the Traders & Reticulator and End Users to calculate trading margin. The approach is different from the previous application where costs and assets where consolidated to determine one tariff.

5.7 In terms of this application, the applicant intends to implement a similar differentiation between traders and reticulators ("Traders") and customers who purchase gas for their own consumption ("End-users") by applying cost to serve principles entrenched in the Methodology to determine the applicable trading margins for Traders and End-users respectively.

5.8 Sasol Gas is applying for the approval of the trading margins according to table 1 below:

TABLE 1: TRADING MARGING APPLIED FOR THE PERIOD FY18 – FY19

CUSTOMER	FY18	FY19
Traders & Reticulators	R5.26/GJ	R6.90/GJ
End Users	R5.99/GJ	R7.66/GJ

5.9 The table 2 and 3 below provide summary of the allowable revenue to be recovered through the trading margins over the periods 2017/18 and 2018/19 as well as the forecasted volumes for the respective periods for traders and reticulators and for end users:

TABLE 2: ALLOWABLE REVENUE FOR TRADERS AND RETICULATORS FOR FY18 – FY19

Reference		FY18	FY19
Regulatory asset base (RAB) [R]	Opening balance + prorated additions	███	███
Working capital[R]	Per methodology	███	███
Cost of sales[R]	Opening stock + purchases less closing stock	███	███
Weighted average cost of capital (WACC) components	Ke	███	███
	Kd	███	███
	Gearing	██	██
	WACC	███	███
(TRAB + COS) x WACC		███	███
Operational Costs[R]	E	███	███
Depreciation[R]	E	███	███
Corporate tax[R]	T	███	███
Clawback (±) on volumes	Giveback	███	█
ALLOWABLE REVENUE		███	███

NB:Information to be supplied by the licensee

TABLE 3: ALLOWABLE REVENUE FOR END USERS FOR FY18 – FY1THE PERIOD JULY

Reference	REREFENCE	FY18	FY19
Regulatory asset base (RAB) [R]	Opening balance + prorated additions	███	███
Working capital[R]	Per methodology	███	███
Cost of sales[R]	Opening stock + purchases less closing stock	███	███
Weighted average cost of capital (WACC) components	Ke	███	███
	Kd	███	███
	Gearing	██	██
	WACC	███	███
(TRAB + COS) x WACC		███	███

Operational Costs[R]	E	███████	███████
Depreciation[R]	E	█████	█████
Corporate tax[R]	T	█████	█████
Clawback (±) on volumes	Giveback	██████	██
ALLOWABLE REVENUE		██████	██████

Information to be supplied by the licensee

6 NERSA ANALYSIS OF THE APPLICATION

6.1 When assessing an application, NERSA is guided by section 3.6.3 of the Methodology which states that:

"The trader's margin (as a percentage) will be calculated in nominal terms. The nominal Weighted Average Cost of Capital (WACC) of the trader will be the trading margin (%), since all other expenses are allowed to the licensee as a pass-through. In so doing, the Energy Regulator will ensure the return on investment as derived in the cost of capital calculation explained below is achieved.

Gas trading margins will be applied to the sum of 'Cost of Sales' plus 'Trading RAB' of that trader plus 'Working Capital'.

Cost of Sales and operating expenses that are allowable in the piped-gas trading business are those determined in terms of the prescribed Volume 1 and Volume 3 of the Regulatory Reporting Manuals for the piped-gas industry."

6.2 The formula for trading services provided to trading customers of a trading licensee is:

Allowable Revenue (trading) =

{((TRAB + Cost of Sales + Working Capital)* Margin) + Expenses + T ± C}

Where:

TRAB   = *approved historical trading services assets less accumulated depreciation*

Working Capital   = *approved 45-day-average trading working capital*

Expenses = *approved efficient trading operating expenses including depreciation*

Cost of Sales = *Opening inventory of gas held for sale + Purchases of gas for sale - Closing inventory of gas held for sale*

Margin *= Trading margin (%) determined in nominal WACC terms*

T *= Corporate tax expense for the period*

C *= Clawback (+/-)*

6.3   The above formula illustrates that the allowable revenue calculation is essentially the estimation of the cost of providing trading services to customers.

6.4   The paragraphs below provide the analysis of each component of the allowable revenue in calculating the trading margin for traders and reticulators as well as end user customers. Tables 4 and 5 illustrate the summary calculation of each component of the allowable revenue and trading margin. The differences between NERSA and Sasol Gas calculations are less than 10% and are explained below;

TABLE 4: TRADERS & RETICULATOR

ITEMS	NERSA FY 18	SASOL FY 18	DIFF IN %	NERSA FY 19	SASOL FY 19	DIFF IN %
Total RAB	▬	▬	0.00%	▬	▬	0.00%
WACC	▬	▬	10.81%	▬	▬	12.33%
Return (RAB*WACC)	▬	▬	10.81%	▬	▬	10.80%
Operating Costs (E)	▬	▬	0.00%	▬	▬	0.00%
Depreciation	▬	▬	0.00%	▬	▬	0.00%
AR before Tax	▬	▬	10.43%	▬	▬	0.00%
Nominal Tax (T)	▬	▬	0.00%	▬	▬	0.00%
Clawback (C)	▬	▬	0.00%	▏	▏	0.00%
Allowable Revenue (AR)	▬	▬	0.00%	▬	▬	0.00%
Volumes	▬	▬	0.00%	▬	▬	0.00%
Trading Margin(R/GJ)	**4.76**	**5.26**	9.47%	**6.38**	**6.90**	7.59%

TABLE 5: END USERS

ITEMS	NERSA FY 18	SASOL FY 18	DIFF IN %	NERSA FY 19	SASOL FY 19	DIFF IN %
Total RAB	██████	██████	0.00%	██████	██████	0.00%
WACC	███	███	10.81%	███	███	10.81%
Return (RAB*WACC)	██████	██████	10.81%	██████	██████	10.81%
Operating Costs (E)	██████	██████	0.00%	██████	██████	0.00%
Depreciation	████	████	0.00%	████	████	0.00%
AR before Tax	██████	██████	9.06%	██████	██████	9.08%
Nominal Tax (T)	██████	██████	0.00%	██████	██████	0.00%
Clawback (C)	███████	███████	0.00%	█	█	0.00%
Allowable Revenue (AR)	███████	███████	8.32%	███████	███████	6.84%
Volumes	██████	██████	0.00%	██████	██████	0.00%
Margin	5.49	5.99	8.32%	7.13	7.65	7.80%

Trading Regulatory Asset Base (RAB)

6.5 In terms of section 3.6.1 of The Methodology, *trading licensees would not have piped-gas network assets, and if they do it would be insignificant [such assets are referred to as the 'Piped-gas trading plant in service' in the Regulatory Reporting Manuals (RMM)]. There may also be limited amounts of non-network assets (referred to as the 'Piped-gas general plant' in the RRM). The sum of the two will form the regulatory asset base (RAB) of a trading licensee.*

6.6 Investments in such limited and trading-specific piped-gas network assets, which are ordinarily required in the normal course of a piped-gas trading business, plus the general plant used for piped-gas trading, will be recovered through the trading margin.

6.7 The RAB value is a historical amount which is not trended. The formula for this is as follows:

Regulatory Asset Base = Original Cost of Property, Plant & Equipment (v) - Accumulated Depreciation (d)

6.8 According to Sasol Gas, the trading assets include such items as vehicles, software and other general assets such as leasehold improvements. These

assets are allocated to the trading portion of Sasol Gas' business as per the NERSA approved CAM principles using appropriate drivers for allocation. The useful lives and depreciation of the assets are the same as per International Financial Reporting Standards ("IFRS") rules. Trading assets expected to be commissioned during the forthcoming trading margin period have been admitted to the trading regulated asset base in proportion to the share of the period under review in which they will be used, i.e. pro-rated.

6.9 Sasol Gas is applying for the RAB in Property, Plant and Equipment (PPE) to total of ██████████ for End Users and ██████████ for Traders in FY 18. Sasol Gas is also applying for the PPE of █████████ for End Users and ██ █████████ for Traders in FY 18.

6.10 In the analyses of the RAB, NERSA determined that the increase in RAB is less than 10% between FY 18 and FY 19 which is reasonable and it relates to the additions required in order for Sasol Gas to render the service of gas trade to customers. NERSA requested Sasol Gas to provide an asset register to analyse detailed assets and asset additions. The trading assets on the asset register consist of transport equipment, energy advisor fleet vehicles, tools and work equipment and computers. NERSA has accepted the value of assets applied for and will verify these during the year-end audit procedure. Any difference will be corrected as part of the clawback when the next trading margin application is submitted to NERSA.

Net Working Capital (w)

6.11 Net working capital refers to the various regulatory asset base funding requirements other than trading utility plant in service. This is determined using the following formula:

Net working capital = inventory + receivables + operating cash – trade payables.

6.12 According to the applicant, Sasol Gas has not conducted a lead lag study and has opted for the assumption of a 45-day operating cash cycle as indicated in section 4.6 of the Guidelines. The working capital determined by Sasol Gas for

FY 18 is ▮▮▮▮▮▮▮▮ and for FY19 is determined at ▮▮▮▮▮▮▮▮. Sasol Gas followed the stipulation of the Methodology and used the 45 day operating cycle when applied for the working capital. NERSA has accepted the amounts determined by Sasol Gas in its application. The amounts are split between the traders & reticulators as well as end user customers as per table 6 and 7 below

TABLE 6: WOKING CAPITAL: TRADERS & RETICULATORS

Item	FY18	FY19
Inventory	▮▮▮▮	▮▮▮▮
Receivables	▮▮▮▮	▮▮▮▮
Operating cash	▮▮▮▮	▮▮▮▮
Payables	▮▮▮▮	▮▮▮▮
Working Capital	▮▮▮▮	▮▮▮▮

TABLE 7: WOKING CAPITAL: END-USERS

Item	FY18	FY19
Inventory	▮▮▮▮	▮▮▮▮
Receivables	▮▮▮▮	▮▮▮▮
Operating cash	▮▮▮▮	▮▮▮▮
Payables	▮▮▮▮	▮▮▮▮
Working Capital	▮▮▮▮	▮▮▮▮

6.13 According to Sasol Gas the difference between the opening and closing stock is due to the volume allocation. Sasol Gas calculated the working capital in total for the applicable years and then allocate according to volumes, this resulted in the differences between the opening and closing stock of ▮▮▮▮▮▮▮▮ for both traders and reticulators and end user customer as indicated below.

6.14 NERSA has accepted the amounts determined by Sasol Gas in its application according to the table 6 and 7 above. NERSA recalculated the above figures using 45 days period and determined them to be correct.

Cost of Sales (COS)

6.15 Section 3.6.3 of The Methodology states that Cost of Sales and operating expenses that are allowable in the piped-gas trading business are those determined in terms of the prescribed Volume 1 and Volume 3 of the Regulatory Reporting Manuals for the piped-gas industry. The cost of sales and expenses submitted by Sasol Gas were prepared in terms of the principles of its Cost Allocation Manual ("CAM") approved by NERSA in 2012. Sasol Gas is using this approved CAM to determine the allocation of costs between licensed activities namely Trading, Transmission and Distribution.

6.16 According to the applicant, the cost of sales is determined by the arms-length contract between Sasol Gas and the producers of gas. Sasol Gas' forecasted cost of sales is based on the adjustment mechanism contained in the respective contracts using Sasol Group assumptions for forecasts of economic indicators.

6.17 The table 8 and 9 below shows the cost of sales forecasts split allocated between traders & reticulators and end user customer, the split is based on volumes directly relating to end users ad traders:

TABLE 8: COST OF SALES FOR TRADERS

Item	FY18	FY19
Opening inventory	███████	███████
Gas purchases	███████	███████
Less Closing inventory	███████	███████
Cost of Sales	███████	███████

TABLE 9: COST OF SALES FOR END USERS

Item	1 July '17– 30 June '18	1 July '18 – 30 June '19
Opening inventory	███████	███████
Gas purchases	███████	███████
Less Closing inventory	███████	███████
Cost of Sales	███████	███████

6.18 The Cost of Sales figures show the cost of gas as purchased by Sasol Gas which consists of gas purchases from Sasol Gas Petroleum in Temane (SPT), Synfuels methane natural gas and Infrachem syngas in Sasolburg.

6.19 NERSA accepted the forecasted cost of sale applied for by Sasol Gas for FY18, however for the FY 19 NERSA identified that the closing inventory for the FY 18 is not the same as the opening inventory for FY 19. As a results NERSA adjusted for the difference in order to determine cost of sales. The difference between Sasol Gas and NERSA's recalculated cost of sales is ███████████ for both Traders & Reticulaotrs and End User customers as shown in the table 10 below;

TABLE 10: COST OF SALES DIFFERENCE FOR FY 2019

TRADERS			
	SASOL	**NERSA**	**DIFFERENCE**
Opening inventory	███████	██████	███████
Gas purchases	███████	██████	█
Less closing inventory	██████	██████	█
Cost of Sales	██████	██████	███████
END USERS			
	SASOL	**NERSA**	**DIFFERENCE**
Opening inventory	██████	█████	██████
Gas purchases	███████	██████	█
Less closing inventory	██████	█████	█
Cost of Sales	███████	██████	██████

6.20 The above difference in cost of sales resulted in the difference of total RAB figure between NERSA and Sasol Gas for the FY 19. Below table 11 is the RAB summary for both FY 18 and FY 19 as determined by NERSA and Sasol Gas.

TABLE 11: RAB SUMMARY

TRADERS & RETICULATORS RAB						
	NERSA		**SASOL GAS**		**DIFFERENCE**	
RAB Calculation	**2017 / 2018**	**2018 / 2019**	**2017/ 2018**	**2018 / 2019**	**2017/ 2018**	**2018 / 2019**
(RAB= Assets +Cos + net working capital)						

	NERSA 2017/2018	NERSA 2018/2019	SASOL GAS 2017/2018	SASOL GAS 2018/2019	DIFFERENCE 2017/2018	DIFFERENCE 2018/2019
Trading Assets	▆	▆	▆	▆		
COS	▆	▆	▆	▆		▆
Net Working Capital	▆	▆	▆	▆		
Total RAB	▆	▆	▆	▆		▆

END USERS RAB						
	NERSA		**SASOL GAS**		**DIFFERENCE**	
RAB Calculation	**2017 / 2018**	**2018 / 2019**	**2017/ 2018**	**2018 / 2019**	**2017/ 2018**	**2018 / 2019**
(RAB= Assets +Cos + net working capital)						
Trading Assets	▆	▆	▆	▆		
COS	▆	▆		▆		▆
Net Working Capital	▆	▆	▆	▆		
Total RAB	▆	▆	▆	▆		▆

6.21 The volumes breakdown used to determine RAB and allocation between end users and traders is as per table 12 below. In total volumes are expected to increase by ▆ between FY 18 and FY19;

TABLE 12: VOLUMES

	FY 18 Volume (GJ)	FY 19 Volume (GJ)	Movement in %
SPT	▆	▆	▆
Synfuels	▆	▆	▆
Infrachem	▆	▆	▆
Total	▆	▆	▆

Depreciation

6.22 The RAB figures of ▆ in FY18 and ▆ in FY19 are net book values. Sasol Gas depreciated the assets on its straight line depreciation over the useful lives of assets. The estimated useful lives of trading assets range between 5 to 7 years. The assets are depreciated at the values of ▆ for FY18 and ▆ in FY 19 respectively. The depreciation is split between the traders as ▆ in FY18 and ▆ for end user customers. In FY19 the split between traders is ▆ and ▆ for end users. The depreciation will be confirmed during the audit process during the year end procedure.

6.23 It must be noted that the depreciation amounts applied for by Sasol Gas under the trading activities is higher in comparison to the transmission related activities due to the shorter useful lives assets. Trading assets have shorter useful lives and are depreciated over a shorter period resulting high depreciation values.

6.24 NERSA allowed the depreciation determined by Sasol Gas based on a straight line depreciation method over the useful lives of assets based on the principle that the allowed values will be verified at year end when the regulatory financial reports are audited. Any differences between the forecasted information used for trading margin determination and actual audited values will be corrected through the claw back mechanism. NERSA also determined that the increase in depreciation between FY 18 and FY 19 is attributed to the additions in assets.

Tax (T)

6.25 Section 4.3 of the Tariff Guidelines that NERSA allows the licensee a choice between the flow-through and normalised tax approaches. However, once a licensee has chosen an approach, it is not permitted to change. However, the flow-through tax approach is the Energy Regulator's preferred tax methodology.

6.26 Tax refers to a licensee's estimated tax payable to the tax authority with respect to taxable allowable revenue from the regulated activity for the tariff period under review. NERSA allows the licensee a choice between the flow-through and normalised tax approaches. However, once a licensee has chosen an approach, it is not permitted to change. The flow-through tax approach is the Energy Regulator's preferred tax methodology.

6.27 The flow-through approach is an approach whereby only current income taxes payable are factored into the allowable revenue and recovered in the tariff during the period under review.

6.28 According to applicant, Sasol Gas applied the flow through approach for the treatment of the tax expense in accordance with the preference given to this approach in Section 4.3 of the Guidelines and because it facilitates simple practical implementation.

6.29 Sasol Gas applied for a flow through tax of ▮▮▮▮▮▮▮▮ in FY18 and ▮▮▮▮▮ in FY19 for Traders & Reticulators; and flow through tax of ▮▮▮▮▮▮ in FY18, ▮▮▮▮▮▮▮▮▮ in FY19 for end users.

6.30 NERSA accepted the flow through tax applied for by Sasol Gas, the tax expense will be audited during the yearend audit procedure. Any difference between the forecasted figure and actual tax will be adjusted through the claw back mechanism.

Operating Costs (E)

6.31 According to section 3.6.2 of the Methodology, all operating costs, including depreciation for the application year, that are efficient and prudently incurred by the piped-gas trading licensee shall be allowed as a pass-through in the trading margin. The operating expenses shall be grouped and reported to the Energy Regulator in accordance with the RRMs.

6.32 In assessing the operating expenses, NERSA analysed the expenses submitted to determine if these are costs and expenses incurred in the trading business of Sasol Gas and whether the these expenses are for the regulated business for trading activities. Sasol Gas confirmed to NERSA that it implemented systems to enable the cost allocation in terms of NERSA approved CAM and the implementation plan. This ensures that the total Sasol Gas costs are distributed to the activities (including non-regulated activities). Duplication of costs is not possible as allocation is performed systematically and the system (through the cross activity posting accounts) ensures that the **total allocated amounts per activity** less the **total Sasol Gas costs nets to zero.**

6.33 Sasol Gas applied for operating expenses of ▮▮▮▮▮▮▮ for FY18 and ▮▮▮▮ ▮▮▮ for FY19 in relation to the Traders & Reticulators. In addition, for operating expenses of ▮▮▮▮▮▮ for FY18 and ▮▮▮▮▮▮ for FY19 in relation to the End user customers.   NERSA used the principles as articulated in the Methodology and assessed each expense item as provided by Sasol Gas and used the same figures as Sasol Gas. The operating expenses include items such as operations and maintenance, sale promotions, administrative expenses etc.

All these expenses will be reconciled to the relevant business unit of Sasol Gas during the yearend audit of regulatory financial reports.

6.34 NERSA analysed the expenses as submitted by Sasol Gas and determined that the FY 18 have decreased by projected 47% as compared to inflation adjusted cost of FY 16. The actual amounts for FY 17 will be confirmed on the completion of FY 17 regulatory financial reporting. Table 13 below summarises the movement of expense between Sasol Gas financial years and NERSA has accepted the increases to be reasonable;

TABLE 13: OPERATING EXPENSES ANALYSIS

Items	FY 16	Projected FY 2017	FY 18	FY 19
Operations Expenses	██████████	██████████	██████████	██████████
% Increases	n/a	6%	-47%	6%

Weighted Average Cost of Capital (WACC)

6.35 The nominal WACC will be calculated as prescribed in **Appendix 1** of The Methodology (*Appendix 1 – Determination of WACC*).

$$WACC_{(real)} = \left[\left(\frac{E}{Dt + E} \right) * Ke_{(real)} \right] + \left[\left(\frac{Dt}{Dt + E} \right) * Kd_{(real)} \right]$$

Where:

E = equity

Dt = debt

Ke$_{(real)}$ = real cost of equity derived from the Capital Asset Pricing Model (CAPM)

Kd$_{(real)}$ = the post tax real cost of debt

TABLE 14: WACC CALCULATION SUMMARY

	NERSA	Sasol Gas	Difference
Cost of Equity (Ke=Rf+(MRP*beta)			
Market Risk Premium (MRP)	5.85%	7.06%	17%
Nominal Risk free rate (Rf)	11.17%	11.72%	5%
Beta	████	████	████
Nominal Cost of Equity (Ke)	████	████	████
Cost of Debt			
Nominal Cost of Debt (kd)	████	████	████

Post tax Nominal cost of debt (kd)	███████		
	██	██	██
Debt ratio	███████		
Equity ratio	███████		
Nominal WACC	███████		

6.36 The WACC stated above will be used for both FY18 and FY 19. Table 14 above shows different WACC calculations between NERSA and Sasol Gas. The differences between these WACC calculations are explained in the following paragraphs.

6.37 Sasol Gas determines its cost of capital using the Capital Asset Pricing Model. The Methodology requires that the trader's margin be calculated in nominal terms. The nominal Weighted Average Cost of Capital ("WACC") of the trader will be the trading margin (%).

6.38 Sasol Gas nominal WACC is ██████ and is based on a nominal pre-tax cost of debt (Kd) of █████ and nominal cost of equity (Ke) of ██████. Sasol Gas indicated in its WACC calculation that ████████████████████████ ██ NERSA recalculated the nominal WACC to be ██████ and the difference is explained below.

Beta

6.39 Sasol Gas determined beta β(e) with reference to the average beta of six international pipeline companies, following the steps as set out in Section 4.7 of the Guidelines. Sasol Gas submits that pursuant to the consistency contemplated in Section 2.2 of the Methodology, this is equally applicable to its trading application.

6.40 The beta (β) was determined by proxy. As a proxy, the average of six gas pipeline companies chosen by the Energy Regulator and listed on stock exchanges must be used as per the Tariff Guidelines. The following US companies were used by the Sasol Gas as proxies:

- New Jersey Resources;
- UGI Corporation;

- South Jersey Industries;
- WGL Holdings Inc.;
- The Laclede Group; and
- Piedmont Natural Gas Company Inc.

6.41 Sasol Gas used the above companies and the below mentioned data to derive a beta of ▮▮▮▮

- weekly returns observations;
- an estimation window using returns measured over the five-year period. In the previous tariff application, Sasol Gas used a five-year period; and
- raw equity betas which were not adjusted for proxy companies' tax.

6.42 The beta was calculated using the Hamada methodology. NERSA used the same companies as those selected by Sasol Gas and updated its beta as at 15 May 2017 to be ▮▮▮▮

6.43 The Guidelines do not provide specific direction on some methodological choices, specifically in the estimation and adjustment of the equity betas of the proxy companies.

6.44 The beta for proxy companies is extracted from Bloomberg on 15 May 2016 by NERSA and on 8 December 2016 by Sasol Gas. The relative size of each proxy company, measured as the sum of the average market capitalisation and average debt, was used as the weights applied in this weighted average calculation. Finally, the Sasol Gas' asset beta was re-levered, using the Hamada formula and assuming a gearing level of ▮▮▮▮ to obtain the Applicant's equity beta. Sasol Gas' calculated equity beta is ▮▮▮▮.

6.45 The difference between NERSA and Sasol Gas beta data is due to difference in the time when the data was extracted. As indicated above NERSA used weekly observations over 2 years whereas Sasol Gas used weekly observations over 5 years

MRP & Rf

6.46 The market risk premium (MRP) is the return investors can expect to earn over and above the risk-free rate by investing in the stock market.

6.47 For this application, Sasol Gas applied the same principles and logic used in the 2016 and 2017 approved application. This has resulted in a MRP of 7, 06% and a risk-free rate of 11, 72% when using the Arithmetic method. The MRP is calculated based on the month-on-month difference between the stock market returns and risk free asset. The Johannesburg Stock Exchange (JSE) All Share Index (ALSI – Total Returns Index (J203)) was used as the proxy for stock market returns, and Government Bonds of 10 years and longer as the proxy risk-free rate.

6.48 Sasol Gas has used 34 years (408 months) from March 1982 to February 2016 in calculating the MRP and the RFR which is the longest time period of available information.

6.49 It is submitted that future trading margin applications and thus future calculations of the MRP estimate should continue to utilise the longest time period possible. With regards to the Government Bonds used as a proxy for risk free assets, the Guidelines state: 'Generally the spot prices of selected 5 to 10-year government of South Africa bonds are used for the expected risk-free return when estimating the cost of equity capital'. Sasol Gas agrees on the use of Government bonds as proxy risk free assets. However, the maturity period of the bond and the investment horizon of the business should align. Therefore Government Bonds of 10 years and longer have been used as the proxy risk-free rate.

6.50 NERSA calculated the mark-to-market risk free rate of a selected 10 years government of South Africa bonds and used it to determine the expected risk free return (Rf) in the estimation of cost of equity. This yielded a nominal risk free rate of 11.17% over 360 months (30 years) and the MRP of 5.85%. The difference is due to NERSA using the 360 months period as prescribed by the Revised Guidelines for Monitoring and Approving Piped-Gas Transmission and Storage Tariffs in South Africa.

Cost of Debt (Kd)

6.51 As a subsidiary of Sasol Limited, Sasol Gas debt is sourced through the Sasol Group. The Sasol Group cost of debt is ███ (nominal pre-tax). The nominal post tax cost of debt is ███.

Claw back

6.52 Sasol Gas has recalculated the net effect of claw back for the FY15 and FY 16 to be ██████ as per audited Regulatory Financial Report as at 30 June 2016. The net amount of ██████ is made up of ██████ give back of FY 15 and ██████ clawback of FY 16. The clawback has been allocated to Traders and End users proportionally using the volumes as the drivers for allocation as ██████ for Traders and ██████.

6.53 NERSA has confirmed the clawback of Sasol Gas recovery by reconciling Sasol Gas calculations to the audited regulatory financial reports for FY15 and FY16. Table 15 below is the recalculation of the claw back amount as applied by Sasol Gas.

TABLE 15: CLAWBACK RECALCULATIONS SUMMARY FY 18

REFERENCE		Rands
Regulated Asset		
Regulated Liability (Over Recovery)		████
Net Liability		████
		█
FY16 Clawback		█
Regulated Asset (Under Recovery)		████
Regulated Liability		████
Net Asset		████
Total net Effect		████
		█
Allocation method		█
Traders and reticulators Volumes		████
End users volumes		████
Total volumes		████
		█
Allocation based on volumes		█
Traders and reticulators Volumes		████
End users volumes		████

6.54 In line with the above NERSA has accepted the reasonability of Sasol Gas's giveback amount of ██████ as recalculated.

7 IMPACT OF THE PROPOSED TRADING MARGIN

7.1 The trading margin as applied by Sasol Gas has significant increase and decrease movement to traders and end users as 01 July 2017. Table 16 below shows the increases and decreases of the trading margin for FY 18 and FY 19.

TABLE 16: SASOL GAS TARIFF MOVEMENT ANALYSIS

ITEMS	END USERS	TRADERS & RETICULATORS
Trading Margin for FY June 17- R/GJ	8.97	4.49
Trading Margin for FY June 18- R/GJ	5.99	5.26
Trading Margin Increase (Decrease) in %	(33%)	17%
Trading Margin for FY June 18- R/GJ	5.99	5.26
Trading Margin for FY June 19- R/GJ	7.65	6.90
Trading Margin Increase (Decrease) in %	28%	31%

7.2 The increase of 17% to the traders in FY 18 is due to the change of the allocation of allowable revenue between traders and end users. The previous trading margin was determined based on the total allowable revenue for Sasol Gas trading business and traders awarded 50% discount. The current approach by Sasol Gas is to separate assets and costs in the allowable revenue for end users and traders. End users experienced 33% decreases in the FY 18 due to the giveback that Sasol Gas included in the FY 18 allowable revenue.

7.3 The subsequent increase of 28% and 31% for end users and traders respectively in FY 19 is due to the giveback realised in FY 18 not being available for FY 19. In total the trading margin applied shows a steep increase for the traders for both FY 18 and FY 19.

7.4 Table 17 below shows the impact of the current approach of separating the allowable revenue versus the consolidated approach that was used by Sasol gas in the last application for the trading margin.

TABLE 17: SASOL GAS TRADING MARGIN SEPARATE AND COMBINED ALLOWABLE REVENUE APPROACH

ITEMS	END USERS	TRADERS & RETICULATORS
Trading Margin (Consolidation) for FY June 18- R/GJ	5.93	2.96
Trading Margin (Proportional Application) for FY June 18- R/GJ	5.99	5.26

Trading Margin Increase (Decrease) in %	1%	78%
Trading Margin (Consolidation) for FY June 19- R/GJ	7.59	3.80
Trading Margin (Proportional Application) for FY June 19- R/GJ	7.65	6.90
Trading Margin Increase (Decrease) in %	1%	82%

7.5 The above table shows that by changing the approach of calculating the allowable revenue, the trading margin increased by 78% for traders and 1% for end users in the FY 18 as compared to the previous combined approach. In the FY 19 traders had 95% increase and the increase for end users was 8%.

8   QUESTIONS TO STAKEHOLDERS

8.1 Stakeholders are requested answer the following question as part of the comments to the Energy Regulator;

      8.1.1 Should there be a distinction between the end users and trader & reticulators trading margin?

      8.1.2 Is the split of joint costs and assets through volumes fair to the customers?

      8.1.3 What is the stakeholder's opinion on the methodology of rate of return used by Sasol gas to determine the trading margin for traders and reticulators?

9   CONCLUSION

Stakeholders are requested to comment on the Draft assessment. Written comments are to be submitted to the Energy Regulator on the following email address: gpt@nersa.org.za or to NERSA offices at Kulawula House, 526 Madiba Street, Acardia, Pretoria by xxxxxxxxxx.