DISCUSSION DOCUMENT ON THE DRAFT ASSESSMENT OF SLG (PTY) LTD'S MAXIMUM PRICE APPLICATION FOR THE PERIOD 01 JULY 2017 TO 30 JUNE 2018

1. INTRODUCTION

1.1 The National Energy Regulator of South Africa (NERSA) is mandated in terms of the National Energy Regulator Act, 2004 (Act No. 40 of 2004) ('NERSA Act') to regulate the electricity, piped-gas and petroleum pipeline industries in terms of the Electricity Regulation Act, 2006 (Act No. 4 of 2006), the Gas Act, 2001 (Act No. 48 of 2001) ('the Gas Act') and the Petroleum Pipelines Act, 2003 (Act No. 60 of 2003).

1.2 Section 21(1)(p) prescribes that the Energy Regulator may impose licence conditions within the following framework of requirements and limitations: 'maximum prices for distributors, 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)'. The Energy Regulator decided that there is inadequate competition on 29 March 2016. A notice was then published in the media inviting licensees to apply for maximum prices.

1.3 This discussion document provides NERSA's preliminary assessment of the maximum price of piped-gas for SLG (Pty) Ltd for the period 01 July 2017 to 30 June 2018.

1.4 Interested parties are invited to provide written comments to the Energy Regulator, which will be considered before taking a final decision on this matter. The deadline for submitting comments is 08 September 2017.

2. APPLICABLE LAW

2.1 The legal basis for NERSA to regulate the prices of piped-gas is derived from the NERSA Act, read with the Gas Act.

3. BACKGROUND

The Methodology to Approve Maximum Prices for Piped-Gas in South Africa (2011)

3.1 In terms of section 4(g) of the Gas Act, the Energy Regulator must, as appropriate, regulate prices in terms of section 21(1)(p) of the Gas Act 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) ('the Piped-Gas Regulations'), which deals 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 Gas 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 With this particular requirement, NERSA 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.

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) ("the 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 and was reviewed 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.

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).

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.

Approving maximum prices of piped-gas

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

a) the Energy Regulator will not set prices but will review maximum piped-gas price applications prepared by licensees or applicants;
b) the Energy Regulator may request licensees or applicants to amend maximum prices; and
c) the Energy Regulator may approve or decide not to approve maximum prices.

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

a) 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.
b) To ensure consistency of applications and predictability of analysis of the applications, the National Energy Regulator has specified the following:
   i. prescribed sources of information that must be used for the input variables in the maximum price calculations;
   ii. prescribed weights applied to energy price indicators; and
   iii. the Methodology to determine trading margins.
c) Applicants must provide information regarding the assumptions as well as the details of the calculation.

3.21 This application must:

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

4.1 On 20 February 2017, the Energy Regulator approved SLG (Pty) Ltd's application for licences to trade in gas in certain areas of the Gauteng, Free State and KwaZulu-Natal (KZN) provinces – licence numbers Gala.tr.F1/1535/2016 and Gala.tr.F1/1549/2016 effective from 01 April 2017.

4.2 The new trading licences approved with effect from 01 April 2017 resulted from Spring Lights Gas (Pty) Ltd revoking its trading licence due to a group restructuring arrangement and the new entity taking over its business activities as they existed at the time of the licence revocation.

4.3 According the applicant, on 04 December 2015 the shareholders of Spring Lights Gas concluded a group restructuring arrangement, wherein the business and all of the assets and liabilities of Spring Lights Gas (Pty) Ltd were sold to a new entity called SLG (Pty) Ltd ('SLG').

4.4 The licence conditions issued by NERSA allow SLG to service customers that extend from Northern KZN along the coast down to Durban South. SLG has also been granted a trading licence in the Gauteng and Free State provinces.

4.5 SLG purchases its gas (methane rich gas) from Sasol Gas. The methane rich gas is pumped into the Lilly pipeline in Secunda and is delivered and sold from Northern KZN along the coast down to Durban South.

4.6 SLG states that it is a leading supplier of piped-gas to industrial and commercial customers in KwaZulu-Natal. According to the applicant, traders of gas are broadly responsible for unearthing new markets for gas consumption, thereby creating the demand for upstream investment. To do that, a trader engages potential customers, establishes their energy requirements, and convinces them of the advantages of gas. After negotiating and concluding a supply agreement with a customer, a trader arranges the supply of piped-gas to the customer's site.

Traders also connect customers to the main pipeline network and convert customers from different sources of energy to gas.

4.7 In addition, the applicant states that as a trader of gas, the company also provides ongoing after-sales technical support to their customers, which entail a suite of after-sales services that aim to ensure customer satisfaction and retention, such as systematic gas quality assurance; comprehensive energy efficiency analysis and advice; and a variety of technical support services such as technical and safety training, advice and safety assurance checks.

5. SLG's MAXIMUM PRICE APPLICATION

5.1 On 13 June 2017, the National Energy Regulator received an application for a maximum price of piped-gas for the period 01 July 2017 to 30 June 2018 from SLG. This is the first maximum price application submitted by SLG after the National Energy Regulator approved application for licenses to trade in gas in certain areas in Gauteng, Free State and KwaZulu-Natal provinces on 20 February 2017.

Gas Energy Price Application

5.2 SLG's maximum price application is made in terms of the price indicator's approach (as opposed to the pass-through approach). SLG is applying for a maximum Gas Energy (GE) price of R140.75/GJ for the period 01 July 2017 to 30 June 2018. This Maximum Price Application is submitted in terms of Section 21(1) (p) of the Gas Act.

5.3 SLG is further applying for the GE to be adjusted on a quarterly basis using the most recent rolling preceding 12 months' averages of the price for each energy indicator. For example, the next adjustment date is 01 October 2017. The GE on 01 October 2017 will be calculated based on the most recent preceding 12 months' rolling averages for each indicator.

5.4 In addition, any adjustments in the pass-through costs will be taken into account in determining the total maximum price.

5.5 The total charges of gas for SLG is the sum of the GE plus trading margin and pass through costs.

5.6 SLG did not apply for discounts applicable to customers across all volume categories or classes of customers.

5.7 It must be noted that while the customer volume categories are prescribed in the Regulations, the percentage discounts are not. This is entirely at the discretion of the licensee. However, the licensee must ensure that discounts are applied in a non-discriminatory manner as contemplated in section 22 of the Gas Act.

5.8 SLG states that according to its understanding, the Maximum Price Application is a method of price capping. The determination of the actual prices to customers must comply with Section 22 of the Gas Act, 2001 while at the same time ensuring that these prices do not exceed the applicable total maximum price).

Trading margin

5.9 In addition to the GE price and as stipulated in Regulation 4(4) read with the Methodology, a trader is allowed to charge a trading margin to recover its trading expenses and earn a reasonable return on its trading assets. In light of this, SLG applied for the following trading margin for the period 01 July 2017 to 30 June 2018.

Table 1: SLG Trading Margin Calculation for the Period 01 July 2017 to June 2018

	TRADING MARGIN	**SLG Rands**
a	Working capital	[redacted]
b	Cost of Sales	[redacted]
c	Total assets	[redacted]
d	**RAB (a+b+c)**	[redacted]
e	WACC	[redacted]
f	**Return on Investment (d*e)**	[redacted]
g	Expenses	[redacted]
h	Depreciation	[redacted]
i	Taxation	[redacted]
j	**Trading Margin** = (f+g+h+i)	[redacted]
k	**Volume**	[redacted]
l	**Margin (R/GJ) =J/k**	**32.58**

INFORMATION TAKEN FROM SLG APPLICATION

6. NERSA ANALYSIS OF THE APPLICATION

6.1 To review SLG's application for a maximum price of piped-gas, the Price Indicator's Approach as outlined in the Methodology was used, since this is the same approach followed by SLG in its application.

The Methodology (using the price indicator's approach)

6.2 According to section 3.1 of the Methodology, the maximum price for gas (at the point of its first entry into the transmission/distribution system) is referenced to price indicators of certain relevant energy sources as detailed below.

$$\boxed{\mathbf{GE} = \boldsymbol{w_1}\,\mathbf{CL} + \boldsymbol{w_2}\,\boldsymbol{DE} + \boldsymbol{w_3}\,\mathbf{EL} + \boldsymbol{w_4}\,\mathbf{HFO} + \boldsymbol{w_5}\,\mathbf{LPG}}$$

Where:

GE = *Maximum price for gas energy (ZAR/GJ) price at the point of its first entry into the piped-gas transmission/distribution system;*

CL = *indicator of equivalent price of coal;*

DE = *indicator of equivalent price of diesel;*

EL = *indicator of equivalent price of electricity;*

HFO = *indicator of equivalent price of heavy fuel oil;*

LPG = *indicator of equivalent price of liquefied petroleum gas;*

Wn = *weighting of the ‘n^{th}’ indicator in the basket (where, $w_1+w_2+w_3+w_4+w_5=100\%$);*

6.3 The formula above is used exclusively for the GE price and does not include trading margins, distribution tariffs, transmission tariffs, storage tariffs and levies.

6.4 Section 3.1 of the Methodology further states that once the GE price is derived, all other charges (margins, tariffs and levies) mentioned above shall be included to arrive at the total gas charge, inclusive of charges to be invoiced.

6.5 The Energy Regulator assessed the GE price using the price indicators of certain relevant energy sources and yielded a price of R140.37/GJ. Below are tables illustrating the GE calculation of NERSA and SLG.

Table 2 : SLG GE Calculation for the Period July 2017 to June 2018

Indicator Energy Form		Average Market Price	Energy Value	Average Exchange rate	Energy price	Weights	Gas Energy Price
			Conversion Factor	Rands/US$ & GBP	Rands/ GJ	%	R/GJ
		a	b	d	e = c x d	f	g = e*f
1	Thermal Coal	73.24	27	13.95	37.84	37.2%	**14.08**
2	HFO	269.83	43	18.26	115.59	1.10%	**1.27**
3	Electricity	87.55	0.0036		243.18	36.50%	**88.76**
4	Diesel	553.49	0.0381		145.27	24.40%	**35.44**
5	LPG	397.38	0.0267		148.83	0.80%	**1.19**
Gas Energy Price						100%	**140.75**

INFORMATION TAKEN FROM SLG APPLICATION

Table 3 : NERSA GE Calculation for the Period July 2017 to June 2018

Indicator Energy Form		Average Market Price	Energy Value	Average Exchange rate	Energy price	Weights	Gas Energy Price
			Conversion Factor	Rands/US$ & GBP	Rands/ GJ	%	R/GJ
		a	b	d	e = c x d	f	g = e*f
1	Thermal Coal	73.57	27	13.96	38.04	37.2%	**14.15**
2	HFO	243.85	43	18.26	103.57	1.10%	**1.14**
3	Electricity	87.23	0.0036		242.31	36.50%	**88.44**
4	Diesel	553.46	0.0381		145.27	24.40%	**35.44**
5	LPG	397.38	0.0267		148.83	0.80%	**1.19**
Gas Energy Price						100%	**140.37**

6.6 In assessing the GE price applied for by SLG, NERSA used the same period for data source used by SLG. The difference between the NERSA and SLG calculations is 0.38 cent and is due to rounding off in calculations on thermal coal, HFO and electricity data sources. The difference between NERSA and SLG calculation is negligible and is below the 10% range. Therefore, NERSA made a preliminary decision to accept SLG's calculation of the GE price.

<u>Determination of the Elements of the Trading Margin</u>

6.7 Section 3.6.3 of the Methodology states that:

> *The trader's return (as a percentage) will be calculated in nominal terms. The nominal Weighted Average Cost of Capital (WACC) of the trader will be the traders return (%), 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 margin (WACC) 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.*

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

Allowable Revenue $_{(trading)}$ =

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

Where:
RAB *= approved historical trading services RAB 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 *= Trader's return (%) determined in nominal WACC terms*
T *= Corporate tax expense for the period*
C *= Claw back (+/-) on volumes*

6.9 The paragraphs below provide an analysis of each component of the trading allowable revenue formula.

Regulatory Asset Base (RAB)

6.10 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.'

6.11 The return on investments in such limited and trading-specific piped-gas 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 earned through a nominal return. The RRMs provide guidance on how the piped gas plant should be recorded, its definition, what it is comprised of among other uses.

6.12 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)

6.13 SLG applied for Trading Regulatory Asset Base (TRAB) to the value of [redacted] being the book value of [redacted]. Included in the RAB are the [redacted]

6.14 As a trader, SLG does not own any pipeline infrastructure assets (i.e. transmission and distribution assets); it is reliant on both Sasol Gas and Transnet Pipelines for the provision of the network infrastructure for the supply of gas.

6.15 In the analyses of the RAB, NERSA disallowed [redacted] to the value of value of [redacted] as shown in table 4 below. The assets in Table 4 are also not included in the list of assets under SLG licence and its licence conditions.

Table 4: [redacted]

Item	Rand Value
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

<u>Depreciation (d)</u>

6.16 In accordance with section 2.2 of the Methodology, reference was made to the Tariff Guidelines, which provide that accumulated depreciation (d) is the cumulative depreciation against plant property, vehicles and equipment in service and it should be calculated on a straight line basis over the economic life of the asset.

6.17 SLG applied for a depreciation of R19 467 130 million; being the depreciation on [redacted], [redacted]. NERSA adjusted the amount to [redacted] by disallowing the depreciation of [redacted] being depreciation on asset additions, which have been disallowed in the above paragraphs. The depreciation expense will be verified during the audit of the regulatory financial reports (RFRs) during the audit procedure at year end.

<u>Operating Costs (E)</u>

6.18 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. In considering the SLG expenses, NERSA also referred to section 4.3 of the Tariff Guidelines, which stipulate that each expenses item should be assessed using principles such as whether the expense was 'prudently incurred', and its controllability and efficiency.

6.19 In assessing the operating costs submitted by SLG, NERSA used the principles as articulated in the Methodology on whether the expenses were prudently and efficiently incurred. The analysis was conducted to ensure that there is no duplication of expenses or cross-subsidisation between the trading and CNG businesses of the SLG group.

6.20 An amount of [redacted] in operating expenses has been allowed, which is made up of general business operating expenses such as insurance fees, labour costs, utilities, rent paid, computer costs, travel and sundry expenses.

6.21 The operating costs will be verified through the audit of the RRM at year end when the audit of the regulatory financial reports are done. Any over and under recoveries between the allowed and the actual expenses will be corrected through the claw back mechanism prescribed in the Tariff Guideline.

Working Capital

6.22 According to the Methodology, the net working capital refers to the various regulatory asset base funding requirements other than utility plant in service. This is determined using the below formula and it should be on a 45-day basis:
Net working capital = inventory + receivables + operating cash – trade payables.

6.23 Operating cash refers to investor-supplied funds needed to bridge the gap between the time expenditures are made to provide a service and the time collections are received for that service. Measurement of required operating cash must be based on licensee's standard practice subject to a maximum 45 days' operating expenses as per the Tariff Guidelines.

6.24 SLG's working capital value of [redacted] consists of trade receivables of [redacted], operating cash of [redacted] based on 45 days operating expenses less trade payables of [redacted]. NERSA accepted the method applied by SLG and used the estimate as provided by the applicant. The figure will be audited at the end of the trading period.

Tax (T)

6.25 Section 4.3 of the Tariff Guidelines states 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 According to the applicant, in determining the tax expense, SLG has applied for its budgeted FY18 current tax expense to be allowed as a pass through. The current tax expense is exclusive of deferred taxation and disallowed amortisation allowances of [redacted]. The amount of tax expense applied for is [redacted], which according to the applicant is reflective of the likely taxation payments to the South African Revenue Services (SARS).

6.27 It must be noted that the tax amount allowed is an estimate and will be audited and is subject to +/- claw-back in subsequent trading margin period as per the Methodology.

Cost of Sales (CoS)

6.28 Section 3.6.3 of the Methodology states that Cost of Sales that are allowable in the piped-gas trading business are those determined in terms of the prescribed Volume 1 and Volume 3 of the RRM for the piped-gas industry.

6.29 In terms of the methodology, the cost of sales are determined according to the formula below:
Cost of Sales = Opening inventory of gas held for sale + Purchases of gas for sale – Closing inventory of gas held for sale

6.30 SLG applied for cost of sales of [redacted]. The CoS amount consists of the projected purchase price of gas excluding tariffs (as these are pass-through costs) to come up with the CoS. As part of the CoS application, SLG included amortisation of customer contributions that SLG has made/budgeted to make to customers in order to converted their facilities to gas. These contributions are written off over the term of the contract. In the previous decisions for Spring Lights Gas applications for maximum price, NERSA accepted contributions costs on condition that these costs must not be included in the Sasol Gas and Transnet RAB. NERSA verified that these costs are not included in the RAB for Sasol Gas and Transnet as part of the RRM audits. Below is a summary of SLG's cost of sales.

Table 5: SLG Cost of Sales Summary

Total GE Costs	[redacted]
Amortisation of customer contributions	[redacted]
Total Cost of Sales	[redacted]

6.31 NERSA considered the amount applied for and will verify the amortisation of customer contracts during the audit process and if necessary, will clawback the amount in the next maximum price application.

Weighted Average Cost of Capital (WACC)

6.32 The Methodology requires that the trader's margin (as a percentage) be calculated in nominal terms. The nominal WACC of the trader will be the trading margin (%). Appendix 1 of the Methodology (***Appendix 1 – Determination of WACC***) illustrates the preferred NERSA method of determining the WACC.

The formula to determine the WACC is as follows:

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

Where:
E = equity
Dt = debt
Ke (nominal) = nominal cost of equity derived from the Capital Asset Pricing Model (CAPM)
Kd (nominal) = the post-tax nominal cost of debt

6.33 Below is a table showing SLG's WACC as well as NERSA calculations.

Table 6: WACC Calculation Summary for the Period 01 July 2017 to June 2018

	Component		NERSA	SLG
	Cost of Equity (Ke=Rf+(MRP*beta)+SSP)			
a	Nominal Market Risk Premium	MRP	4.64%	4.60%
b	Nominal Risk free rate	Rf	11.24%	11.24%
c	Beta	β	[redacted]	[redacted]
d	Small stock premium	**SSP**	[redacted]	
e	***Nominal Cost of Equity (Ke) =(b+(a*c)+d)***	**Ke**	[redacted]	[redacted]
f	Nominal Cost of Debt (kd)	Kd	[redacted]	[redacted]
g	**Post tax nominal cost of debt**	**kd**	[redacted]	[redacted]
h	Debt ratio		[redacted]	[redacted]
i	Equity ratio		[redacted]	[redacted]
j	***Nominal WACC = ((d*h)+(f*g))***	**WACC**	[redacted]	[redacted]
SSP			[redacted]	[redacted]
SRP			[redacted]	[redacted]
			[redacted]	[redacted]

6.34 In its application, SLG determined its WACC to be [redacted] based on a nominal pre-tax cost of debt (Kd) of [redacted] and nominal cost of equity (Ke) of [redacted]. SLG used the minimum [redacted]. The Methodology prescribes a minimum debt: equity in the ratio [redacted].

6.35 In calculating the WACC, SLG applied for additional risks to be added on the WACC such as the small stock premium (SSP) of [redacted] and Specific Risk Premium (SRP) of [redacted]. SLG calculated the SSP based on the PWC Valuation methodology survey 2016/2017 for companies whose value is between [redacted].

6.36 Included in the WACC calculation is the SRP of [redacted] [redacted].

6.37 NERSA has allowed the SSP of [redacted] applied for by SLG as per the Tariff Guidelines. According to the Tariff Guidelines, a small stock premium is an adjustment to the CAPM to account for the other risks associated with small companies that the model does not address. This premium is allowed for all companies that fall into the size bands for which small stock premiums are allowed by practitioners as noted in the latest available PwC Valuation Methodology.

6.38 NERSA has disallowed the SRP of [redacted] on the basis that the Tariff Guidelines does not recognise this form of risk in calculating WACC.

6.39 To calculate the Risk Free Rate (Rf) and the Market Risk Premium (MRP), SLG used 30-year average data using for the period February 1987 to March 2017. SLG applied for an Rf of 11.24% and MRP of 4.60% and calculated a Beta (β) of [redacted].

6.40 In assessing the reasonableness of the WACC, NERSA used the Methodology and came up with a nominal post-tax WACC of [redacted]. NERSA used the [redacted] the same as SLG.

6.41 The yield on loan stock traded on the stock exchange of government bonds with a maturity of 10 years and over were used for the expected risk free return in the estimation of cost of equity. This yielded a nominal risk free rate of 11.24% calculated over 30 years as required by the sources of information approved and published by NERSA.

6.42 The MRP was calculated using the JSE ALL Share Index for the previous 30 years up to February 2017. This yielded a nominal MRP of 4.64%.

6.43 The beta 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 Methodology. The following US companies were used by SLG and NERSA as proxies:

a) New Jersey Resources Inc.
b) UGI Corporation
c) South Jersey Industries
d) WGL Holdings Inc.
e) The Laclede Group
f) Piedmont Natural Gas Company Inc.

6.44 In line with the Methodology, the beta was calculated using the Hamada formula and yielded a beta of [redacted].

6.45 A cost of debt (Kd) of [redacted] was applied for by SLG and used to calculate the nominal post-tax cost of debt of [redacted].

6.46 Table 7 below illustrates the summary of the trading margin calculations taking into account all the required elements discussed above.

Table 7: SLG and NERSA'S Trading Margin Calculation for the Period 01 July 2017 to June 2018

	Trading Margin	SYMBOL	NERSA	SLG	DIFF
	(TRAB = CoS + assets + net working capital)				
a	Working capital	WC	[redacted]	[redacted]	[redacted]
b	Cost of Sales	CoS	[redacted]	[redacted]	[redacted]
c	Total assets	A	[redacted]	[redacted]	[redacted]
d	RAB = a+b+c	**TRAB**	[redacted]	[redacted]	[redacted]
e	WACC	WACC	[redacted]	[redacted]	[redacted]
f	Margin = d*e		[redacted]	[redacted]	[redacted]
g	Operating Expenses	E	[redacted]	[redacted]	[redacted]
i	Depreciation	D	[redacted]	[redacted]	[redacted]
j	Taxation	T	[redacted]	[redacted]	[redacted]
k	Total Trading Margin (TTM) = sum(f:j)		[redacted]	[redacted]	[redacted]
l	Volume	V	[redacted]	[redacted]	[redacted]
m	**Margin (R/GJ)**		**26.73**	**32.58**	-18%

6.47 The difference between the NERSA and SLG trading margin calculations is 18% and it is above the 10% range. The reason for the differences in the trading margin calculation is due to differences in the RAB, WACC and depreciation as detailed in the above paragraphs. NERSA made a preliminary decision that the difference between the NERSA and SLG calculations is very high, therefore SLG must revise its trading margin calculations.

7. TOTAL PIPED-GAS PRICES INCLUSIVE OF TARIFFS

7.1 After the determination of the GE price and the trading margin, the Methodology provides for the gas trader to recover the transmission and the distribution tariffs as a pass through.

7.2 The sum total of the above elements becomes the total charges that may be invoiced by the gas trader to its piped-gas customers.

8. CONCLUSION

8.1 Stakeholders are requested to comment on the Discussion Document on the draft assessment of SLG's maximum price application for the period 01 July 2017 to 30 June 2018. Written comments are to be submitted to the Energy Regulator at the following email address: gpt@nersa.org.za or to the NERSA offices at Kulawula House, 526 Madiba Street, Acardia, Pretoria by 08 September 2017.