

**Consultation Document on the Preliminary Assessment of Maximum Price of Piped-Gas for Spring Lights Gas (Pty) Ltd for the Period 01 July 2015 to 30 June 2016.**

This preliminary assessment of the maximum price of piped-gas is based on information supplied by Spring Lights Gas (Pty) Ltd in its maximum price application and NERSA's assessment is as per the Methodology to Approve Maximum Prices of Piped-Gas in South Africa.

The National Energy Regulator of South Africa ("Energy Regulator" or "NERSA") is publishing this preliminary assessment of the maximum price for public comments. In providing comments, stakeholders may consider the published Methodology to Approve Maximum Prices of Piped-Gas in South Africa and the Regulations as well as the provisions of the Gas Act, 2001 (Act No. 48 of 2001).

Members of the public wishing to submit written comments should do so before the deadline for written comments of **27 August 2015**

Written comments are to be submitted to the Energy Regulator at the following email address: [gpt@nersa.org.za](mailto:gpt@nersa.org.za) or delivered to the NERSA offices at Kulawula House, 526 Madiba Street, Arcadia, Pretoria.

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In addition, NERSA will conduct a public hearing on this application where oral representations may also be made. This public hearing will be held at NERSA's offices at 526 Madiba Street, Arcadia, Pretoria, South Africa.

## 1. INTRODUCTION

- 1.1 The Energy Regulator 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) 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).”
- 1.3 In line with this requirement, the Energy Regulator has given a notice in the media that it has made a preliminary assessment of the maximum price of piped-gas for Spring Lights Gas (Pty) Ltd for the period 01 July 2014 to 30 June 2015. This preliminary assessment is done as per The Methodology to Approve Maximum Prices of Piped-Gas in South Africa.
- 1.4 This consultation document provides background information to the preliminary assessment of the maximum price of piped-gas for Spring Lights Gas (Pty) Ltd for the period 01 July 2015 to 30 June 2016. The application is published on the NERSA website.
- 1.5 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 **27 August 2015**.

## 2. APPLICABLE LAW

- 2.1 The legal basis for the Energy Regulator to regulate prices of piped-gas is derived from the National Energy Regulator Act, 2004 (Act No. 40 of 2004) ('the NERSA 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)**

- 3.1 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 the above stated requirements, the 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 Energy Regulator's website at [www.nersa.org.za](http://www.nersa.org.za).

### **Determination of Inadequate Competition**

3.6 Approving maximum prices and the use of the Methodology are contingent on the 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 Energy Regulator to regulate 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 determination of inadequate competition was approved by the Energy Regulator on 08 February 2012 and is reviewed every three years.

3.9 The Maximum Pricing Methodology also provides for the determination of a trading margin, which is referenced to the Tariff Guidelines. The components used to calculate the trading margin are similar to the components used to calculate the tariffs. Hence the Maximum Pricing Methodology has referenced the determination of the trading margins to the tariff guidelines to ensure that there is consistency in the decisions taken by the Energy Regulator.

### **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 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 Energy Regulator's website at [www.nersa.org.za](http://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. The following are pertinent to this methodology.

3.14 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.

3.15 Annexure A of the Regulations provides the different classes of customers classified in terms of their annual gas consumption in Gigajoules as follows:

<b>CLASS</b>	<b>ANNUAL GAS CONSUMPTION</b>		
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		

3.16 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 Energy Regulator.

### **Approving maximum prices of piped-gas**

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

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

3.18 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 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 made in the price calculation, as well as the details of the calculation.

3.19 The maximum price 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.

3.20 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 Spring Lights Gas (Pty) Ltd ('Spring Lights Gas', 'the applicant' or 'SLG') (registration number 2002/000645/07) is a gas marketing company (a 'trader' in terms of the Gas Act, located in Durban, licensed by the Energy Regulator).

4.2 When it began trading in 2002, Spring Lights Gas was a joint-venture between Sasol Gas Ltd ('Sasol Gas'), a wholly owned subsidiary of Sasol Ltd, and Coal, Energy and Power Resources Limited (CEPR), a Broad-Based Black Economic Empowerment (BBBEE) consortium.

- 4.3 Spring Lights Gas management reported that the original shareholders, Sasol Gas and CEPR, sold their stake sometime in 2012/13 and that Spring Lights Gas is now owned 100% by Kwande 54%, Zico 41% and Lebonex 5% through Adispex Proprietary Limited and Simiglo Proprietary Limited.
- 4.4 Spring Lights Gas purchases methane-rich gas from Sasol Gas and resells this gas to industrial and commercial customers situated in the Durban South region of KwaZulu-Natal. The gas originates from the Sasol Synfuels plant in Secunda in the Mpumalanga province and transported to KwaZulu-Natal via Transnet's gas transmission pipeline from Secunda to Durban, a pipeline commonly referred to as the 'Lilly Pipeline'. Spring Lights Gas then supplies the gas to end customers utilising mainly Sasol Gas's transmission and distribution network in the KwaZulu-Natal area.
- 4.5 Spring Lights Gas supplies piped-gas to industrial and commercial customers in KwaZulu-Natal in South Africa. Its major customers are [REDACTED]. The company's operation network covers Durban, Pietermaritzburg, Newcastle, Richards Bay, Phoenix, Umbilo and Verulam.
- 4.6 Spring Lights Gas's customers consume approximately [REDACTED] Gigajoules of methane-rich gas per annum.

## **5 SPRING LIGHTS GAS' MAXIMUM PRICE APPLICATION**

- 5.1 On 26 June 2015, the Energy Regulator received an application for a maximum price of piped gas from Spring Lights Gas. This application is the fourth application submitted to the Energy Regulator by Spring Lights Gas. Spring Lights Gas third maximum price application was for the period 01 July 2014 to 30 June 2015. According to the Methodology, Spring Lights Gas should have

applied for the current application by 28 February 2015, four months before it can be implemented. Spring Lights Gas requested an extension to submit its application on 30 June 2015 to enable it to seek relevant approval from its BoD. The Energy Regulator granted the extension as requested. Therefore the current approved maximum price will remain in effect until another maximum price is approved by the Energy Regulator.

### **Gas Energy Price Application**

- 5.2 Spring Lights Gas's maximum price application is made in terms of the Price Indicators Approach (as opposed to the pass-through approach). The Price Indicators Approach entails a two-stage process where:
- i. a single maximum price is determined; and
  - ii. discounts can be applied to the above-mentioned maximum price according to section 22 of the Gas Act.
- 5.3 Spring Lights Gas is applying for a maximum Gas Energy (GE) price of R131.09/GJ for the period 01 July 2015 to 30 June 2016.
- 5.4 Spring Lights Gas is applying for a base maximum GE price of R131.09/GJ. Spring Lights Gas has indicated that it will not apply discounts to the above maximum price but will give discounts when it is calculating the actual prices to customers. The discounts will be based on each of its customers load profile and volume consumed, two of the four identifiable differences prescribed in section 22 of the Gas Act.
- 5.5 SLG is also requesting that the maximum price be adjusted quarterly by updating the actual average data as contained in NERSA's formula for GE price. The ensuing adjustments will be applied to the GE price of R131.09/GJ after the first quarter has lapsed, that is on 01 October 2015.

5.6 It must be noted that whilst the customer volume categories are prescribed, the percentage discounts are not. This is entirely at the discretion of the individual applicant subject to section 22 of the Gas Act. In this instance, SLG decided not to propose any discounts and to show the maximum gas price applicable to each of the classes of customers. SLG has informed NERSA that it will consider the prescribed objective and identifiable differences enumerated in section 22 when it charges gas prices. NERSA will closely monitor this in line with provisions of section 22 of the Gas Act in order to ensure compliance.

### **Trading margin**

5.7 In addition to the GE price, a trader is allowed to charge a trading margin so as to recover its trading expenses and earn a return on its trading assets. In light of this, SLG applied for the following trading margin for the period 01 July 2015 to 30 June 2016:

**Table 1: SLG 2014/15 Trading Margin Calculation Summary Table:**

<b>Component</b>	<b>Rands (R)</b>
Cost of Sales (CoS)	██████████
RAB	██████████
Working Capital (WC)	██████████
Recoverable Capital (RC) =(Cos+RAB+WC)	██████████
WACC	██████████
Margin (RC x WACC)	██████████
Expenses	██████████
Taxation	██████████
Depreciation and Amortisation	██████████
<b>Allowable Revenue Rands (R)</b>	██████████
Volumes (GJ)	██████████
<b>Trading Margin (R/GJ)</b>	<b>26.82</b>

## **6 NERSA Analysis of the application**

6.1 To review Spring Lights Gas's application for maximum price of gas, the energy indicator prices approach as outlined in the Methodology was used since this is the same approach followed by Spring Lights Gas in its application.

**The Methodology (using the price indicators 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.



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;*

**W<sub>n</sub>** = *weighting of the 'n<sup>th</sup>' 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 energy indicator prices methodology and yielded a price of R131.06/GJ, a figure that is slightly lower

than the R131.09/GJ that was calculated by SLG. The differences are rounding off errors in the exchange rates used to convert coal and HFO dollar and pound denominated prices, respectively to rands.

## **DETERMINATION OF THE ELEMENTS OF THE TRADING MARGIN OF THE METHODOLOGY**

6.6 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.”*

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



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

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

### **Regulatory Asset Base (RAB)**

- 6.9 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.”*

- 6.10 The return on 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 earned through a nominal return.

- 6.11 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)**

- 6.12 Spring Lights Gas submitted an asset register that illustrates that the RAB is comprised of a customer list and other gas trading equipment. Worth mentioning is that Spring Lights Gas is a trader that does not own any pipeline network assets with long lives and its RAB is comprised mainly of a start-up cost, office furniture and equipment.

6.13 Spring Lights Gas submitted a RAB of [REDACTED]. To independently assess the RAB, NERSA calculated a RAB of [REDACTED]. NERSA used the same RAB figure as SLG because it is more accurate and takes each item on a line by line basis. The RAB will be audited when the Regulatory Financial Reports (RFRs) are submitted to NERSA. Any differences will be subject to a claw back in the maximum price application for the 2017/18 period.

#### **Depreciation (d)**

6.14 The cost of the capital invested in acquiring the RAB will be recovered as part of the cost of providing the trading service as depreciation.

6.15 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.

6.16 Since the original cost and the remaining economic life of assets could be determined, NERSA used the original/historical value to calculate the straight line depreciation cost. Spring Lights Gas applied for [REDACTED], which includes the amortisation of the intangible asset described above. NERSA used the SLG depreciation figure. The depreciation expense will be checked for accuracy during the audit of the RFRs.

#### **Operating Costs (E)**

6.17 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 RRM. In considering the Spring Lights Gas expenses, NERSA also referred to the tariff guidelines section 4.3 that stipulate that each expenses item should be assessed using principles such as whether the expense was “prudently incurred”, its controllability and efficiency.

6.18 Spring Lights Gas applied for operating expenses of [REDACTED] for 2015/16. NERSA used the principles as articulated in the Methodology and assessed each expense item as provided by Spring Lights Gas and used [REDACTED] as operational expenses for 2015/16. NERSA disallowed legal expenses, entertainment, promotional events and BBBEE costs because they not common to a typical trading business, hence these expenses are not part of the costs of providing a trading service to customers.

### **Working Capital**

6.19 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 + minimum cash balance – trade payables.**

6.20 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 excluding depreciation and deferred taxes.

6.21 Spring Lights Gas used the above formula to calculate the working capital and submitted [REDACTED] as the working capital figure. The working capital figure includes [REDACTED] for operating cash that was calculated using a 45 day maximum of the estimated cash fixed costs for the year ending 2016. NERSA accepted the method applied by Spring Lights Gas and used the estimate as provided by the applicant. The figure will be audited

## Tax (T)

- 6.22 In estimating tax, reference was made to section 4.4 of the Tariff Guidelines that provides that the flow-through tax approach is the Energy Regulator's preferred tax methodology. Under this approach, only the current taxes payable are factored into the allowable revenue and recovered during the period under review.
- 6.23 Spring Lights Gas applied for [REDACTED], its estimated actual taxation expense for 2015. NERSA accepted the flow-through tax approach used to determine the estimated tax to be included in the allowable revenue and used [REDACTED], the estimate of the actual taxation for 2015 for Spring Lights Gas.
- 6.24 This is the taxation figure for 2015 is an estimate and will be subject to +/- claw-back in subsequent tariff period as per the methodology.

## Cost of Sales (CoS)

- 6.25 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 Regulatory Reporting Manuals for the piped-gas industry.
- 6.26 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**
- 6.27 SLG applied for cost of sales of [REDACTED]. SLG used its actual purchase price of gas excluding tariffs (because tariffs will be added separately to the maximum price as a pass through) to come up with the cost of sales. Furthermore, Spring Lights Gas is recovering its contribution to assets that are used to connect its customers by Sasol Gas in the cost of sales. The trader does not hold any inventory. NERSA used the same figure that was provided by the applicant.

### **Weighted Average Cost of Capital (WACC)**

6.28 The Methodology requires that the trader's margin (as a percentage) be calculated in nominal terms. The nominal Weighted Average Cost of Capital ("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.

6.29 The formula to determine the WACC is as follows:

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

Where:

**E** = equity

**Dt** = debt

**Ke<sub>(nominal)</sub>** = nominal cost of equity derived from the Capital Asset Pricing Model (CAPM)

**Kd<sub>(nominal)</sub>** = the post-tax nominal cost of debt

6.30 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 indicated in its WACC calculation that it does [REDACTED] and used the minimum prescribed capital structure of debt: equity in the ratio [REDACTED].

6.31 To calculate the risk free rate and the market risk premium, SLG used data for the period January 1990 to December 2014. SLG applied for a risk free rate of 11.05% and MRP of 5.34%. SLG used a beta of [REDACTED]. SLG indicated that there are other risks that are not addressed by the CAPM and added a small stock premium of [REDACTED].

6.32 In assessing the reasonableness of the WACC, NERSA used the Methodology and came up with a nominal post-tax WACC of [REDACTED]. NERSA [REDACTED] the SLG books, meaning that it's [REDACTED] the minimum levels indicated in the Methodology. The Methodology prescribes a [REDACTED] [REDACTED] and this is what NERSA used to calculate the WACC.

6.33 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 ( $R_f$ ) in the estimation of cost of equity. This yielded a nominal risk free rate of 10.95% calculated over 25 years as required by the sources of information approved and published by NERSA.

6.34 The market risk premium (“MRP”) was calculated using the JSE ALL Share Index for the previous 25 years up to April 2015. This yielded a nominal MRP of 5.71%.

6.35 The beta ( $\beta$ ) 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 the NERSA as proxies:

- New Jersey Resources Inc.
- UGI Corporation
- South Jersey Industries
- WGL Holdings Inc.
- The Laclede Group
- Piedmont Natural Gas Company Inc.

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

6.37 A cost of debt ( $K_d$ ) of [REDACTED] was provided by SLG and used to calculate the nominal post-tax cost of debt of [REDACTED].

6.38 The table below summarises the WACC calculation:

**Table 2: Summary of SLG WACC Calculation**

	<b>Component</b>	<b>NERSA</b>	<b>SLG</b>
	<b>Cost of Equity (Ke=Rf+(MRP*beta)</b>		
<b>a</b>	Nominal Market Risk Premium (MRP)	5.71%	5.34%
<b>b</b>	Nominal Risk free rate (Rf)	10.95%	11.05%
<b>c</b>	Beta		
<b>d</b>	Small stock premium		
<b>e</b>	<b>Nominal Cost of Equity (Ke) =(b+(a*c)+d)</b>		
	<b>Cost of Debt</b>		
<b>f</b>	Nominal Cost of Debt (kd)		
<b>g</b>	<b>Post tax nominal cost of debt (kd)</b>		
<b>h</b>	Debt ratio		
<b>i</b>	Equity ratio		
<b>j</b>	<b>Nominal WACC = ((d*h)+(f*g))</b>		

6.39 The table below illustrates the summary of the trading margin calculations taking into account all the required elements discussed earlier. The margins calculated by NERSA are 1% lower than the SLG requested margin. Since forecasts are used in determining the trading margins, these values will be subject to a positive or negative claw-back based on actual audited Regulatory Financial Reports for the year ending 30 June 2016. These claw-backs are lagged by one year and will be implemented in the maximum price application submitted to NERSA for the 2017/18 financial year, as specified in the Tariff Guidelines.

**Table 3: SLG trading margin calculation summary**

	<b>Trading Margin</b>	<b>*NERSA (Rm)</b>	<b>SLG (Rm)</b>
a	Working capital	██████████	██████████
b	Cost of Sales	██████████	██████████
c	Total assets	██████████	██████████
d	RAB = a+b+c	██████████	██████████
e	WACC	██	██
f	Margin = d*e	██████████	██████████
g	OPEX	██████████	██████████
i	Depreciation	██████████	██████████
j	Taxation	██████████	██████████
k	Allowable Revenue= sum(f:j)	██████████	██████████
l	Volume	██████████	██████████
m	<b>Margin (R/GJ) = k/l</b>	<b>26.57</b>	<b>26.82</b>

\*The NERSA figures on the table are rounded to the second decimal eg (██████████)

## 7. TOTAL PIPED-GAS PRICES INCLUSIVE OF TARIFFS

7.1 After determination of the GE price and the trading margin, the Methodology provides for the gas trader to recover the transmission tariffs and the distribution tariff 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 this Preliminary Assessment. Written comments are to be submitted to the Energy Regulator on the following email address: [gpt@nersa.org.za](mailto:gpt@nersa.org.za) or to the NERSA offices at Kulawula House, 526 Madiba Street, Arcadia, Pretoria by 27 August 2015.