NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

In the matter regarding:

Maximum price of piped-gas for NOVO Energy (Pty) Ltd for the period 01 January 2013 to 31 December 2013.

1. THE DECISION

1.1. On 26 February 2013, the Energy Regulator approved that:

NOVO Energy (Pty) Ltd amends its application for the maximum price of piped-gas for the period 01 January 2013 to 31 December 2013.

Reasons for Decision

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2. BACKGROUND

2.1 NERSA derives its mandate regarding piped-gas maximum prices from the Gas Act, 2001 (Act No. 48 of 2001), ("the Gas Act"). According to the Gas Act, the Energy Regulator must, as appropriate, regulate prices in terms of section 21(1) (p), in the prescribed manner.

2.2 Section 21(1) prescribes that the Energy Regulator, may impose licence conditions within the following framework of requirements and limitations: "(p) 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)."

2.3 In line with this particular requirement, NERSA determined on 08 February 2012 that there is inadequate competition in the piped-gas market in South Africa. Therefore, NERSA has developed the

Methodology to approve maximum prices of piped-gas in South Africa ("the Maximum Pricing Methodology" or "the Methodology").

Relationship to the Tariff Guidelines

2.4 The Gas Act differentiates between the methodology that NERSA uses to regulate tariffs and the approval of piped-gas prices. The Tariff Guidelines give guidance on all tariff-related activities, which are charged for gas services and which must be added to the price(s) for piped-gas energy. The Maximum Pricing Methodology provides a methodology that NERSA will follow to regulate charges for gas to distributors, reticulators and final customers (i.e. prices). In the Maximum Pricing Methodology, the assessment of the trading margins (a charge for a gas service) is therefore referenced to the Tariff Guidelines to ensure that there is consistency in the decisions taken by the Energy Regulator.

The Piped-Gas Regulations

2.5 The maximum price assessment principles outlined in the Maximum Pricing Methodology, are further informed by the "Price Regulation Procedures and Principles" prescribed in the Piped-Gas Regulations, promulgated in terms of the Gas Act, Gazette No 29792, 20 April 2007, ('the Regulations").

2.6 Sub-regulation 4 (4) prescribes that the maximum prices determined by NERSA 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.

2.7 The application for a piped-gas price must be provided on an annual basis, although applicants are allowed to apply for approval for longer (multi-year) or shorter (e.g. quarterly) periods.

2.8 Where applicants apply for longer periods (e.g. to accommodate long-term contracts), the initial base price will be determined as prescribed in this methodology and the applicant will specify the manner and

frequency of the price adjustment while the contract is valid, for approval by the Energy Regulator. Such contracts and pricing provisions must be compliant with provisions of the Gas Act and the Regulations at all times.

2.9 These legislative aspects, as prescribed by the Gas Act and the Regulations, provide a framework for assessing the applications for maximum prices of piped-gas.

3. THE MANNER IN WHICH THE ENERGY REGULATOR WILL REGULATE MAXIMUM PRICES OF PIPED-GAS

3.1 As provided in paragraph 2.3 above, for NERSA 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. NERSA made a finding that there is inadequate competition in the piped-gas industry.

Approving maximum prices of piped gas

3.2 In approving maximum piped gas prices:

(a) NERSA will not set prices but will review maximum piped-gas price applications prepared by licensees or applicants;

(b) NERSA may request licensees or applicants to amend maximum prices; and

(c) NERSA may approve or decide not to approve maximum prices.

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

(a) The Energy Regulator will request 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, NERSA has specified the following:-

- prescribed sources of information that must be used for the input variables in the maximum price calculations;
- prescribed weights applied to energy price indicators; and

- the methodology to determine trading margins.

(c) All licensees (or applicants as appropriate) will have to submit an application for maximum piped-gas price approval (a price application) to NERSA.

(d) Applicants must provide information regarding the assumptions made in the price calculation, as well as the detailed calculation.

3.4 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 frequency of price adjustment to be approved by the Energy Regulator.

3.5 NERSA will periodically conduct reviews of approved prices to assess the impact and to verify whether the prices comply with the requirements of the Gas Act and the Regulations.

4. THE APPLICANT

4.1 Novo Energy (Pty) Ltd (registration number 2006/038598/07) is a company incorporated in terms of the Companies Act of 1973, and wholly owns the following subsidiaries:

(i) NOVO ASSETS HOLDINGS (PTY) LTD (NOVO McFarlane (Pty) Ltd is a subsidiary of this;

(ii) NOVO GAS (PTY) LTD (NOVO Sebenza (Pty) Ltd and NOVO Lincoln (Pty) Ltd are subsidiaries of this company;

(iv) NOVO TURNKEY SOLUTIONS (PTY) LTD;

(v) NOVO INVESTMENTS (PTY) LTD; and

(vi) NOVO OPERATIONS (PTY) LTD.

4.2 NOVO Energy (Pty) Ltd (NOVO Energy) obtained a licence to operate gas storage and distribution facilities as well as for trading activities in South Africa in 2009. NOVO Energy's business model is to be involved in sourcing, processing, compressing, distributing and supplying natural

gas or compressed natural gas to various private and public dispensing sites (industrial users).

4.3 By November 2012, NOVO Energy was operating two plants in Benoni and Germiston out of its 10 licensed plants and its current customers are vehicle fleet owners. Any internal combustion engine diesel or petrol can use the NOVO Energy solutions including forklifts, trucks, locomotives, buses, and public transport vehicles among other users.

4.4 NOVO Energy also plans on having industrial customers whereby it takes gas to customer's industrial sites using specialized gas transportation trucks. However the company has not yet acquired these trucks and is still in the business development phase.

4.5 NOVO Energy's model is essentially similar to operating petrol filling stations, only differing in that its station will dispense piped-gas not petrol. The current application is for one licensed station in Germiston and another awaiting a license in Benoni.

4.6 NOVO Energy used the Benoni plant operational data as a proxy to determine the maximum price for its operation in Germiston. The application to amend their current trading licence and include the Benoni plant is currently being processed by the Gas Licensing and Compliance department within NERSA. As part of evaluation of this licence application, NERSA is required in terms of rule 6 to consider the financial viability of the applicant including proposed prices of gas to be charged to customers in that trading area.

5. NOVO ENERGY'S APPLICATION

5.1 On 15 January 2013, the Energy Regulator received an application for a maximum price of piped-gas from NOVO Energy for the period 01 January 2013 to 31 December 2013. NOVO Energy indicated that because of its business model, it will charge one price for vehicle consumers and vary its price for industrial consumers when these become part of its customer base. Therefore this proposed price will

apply to vehicle fuel customers only and not to industrial customers. This is NOVO Energy's first application since the Maximum Pricing Methodology was approved.

5.2 NOVO Energy's maximum price application is for its two facilities that are now operational in Germiston and Benoni. NOVO Energy is licensed to operate in other areas as well but it has only started operating in Benoni and Germiston. In its application, NOVO Energy only submitted data relating to Benoni, its largest operation and would like the Energy Regulator to approve this price which will then be the maximum price for its Germiston operation as well.

5.3 In essence, NOVO Energy used the unlicensed Benoni plant operational data as a proxy to determine the maximum price for its licensed operation in Germiston.

5.4 The justification is that the Germiston station was a demonstration plant, therefore the costs incurred to set it up and run it are too exorbitant and will distort the maximum prices by increasing them excessively. Thus NOVO Energy has only used data regarding Benoni, its first commercial dispensing unit.

5.5 NOVO Energy' applied for a maximum price of piped-gas of R359.79/GJ excluding tax. The price will be itemized as its purchase price from Sasol Gas plus a trading margin. This is depicted in the table below:

Table 1: NOVO Energy maximum price

Component	Price
Gas Energy Price *plus*	[redacted]/GJ
Trading Margin	[redacted]/GJ
Total Price	**R359.79/GJ**

5.6 However the purchase price was increased by Sasol Gas in December 2012 to [redacted]/GJ. It is important to note that NOVO Energy's proposed price did not include taxation whereas the methodology requires the inclusion of taxation. Therefore, NERSA re-stated the

NOVO Energy price taking into account the increase in purchase price and taxation resulting in a price of piped-gas of R417.70/GJ. The detailed breakdown of the price is depicted in section 8.3 in this document.

5.7 NOVO Energy submitted that it did not calculate a Gas Energy (GE) price but rather selected the alternative pass-through approach which is allowed in the Methodology and used its 2012 actual purchase price charged by Sasol Gas (Pty) Ltd (Sasol Gas) and added the trading margin.

5.8 NOVO Energy has indicated that it plans to service industrial customers but it is currently not doing so because of various reasons such as constraints in the gas supply. Therefore the submitted information in the application only applies to vehicle customers.

6. ASSESSMENT OF THE GAS ENERGY PRICE

6.1 According to the Methodology, applicants are required to submit a piped-gas price application for approval 4 months prior to implementation. To calculate the gas energy price, the licensee should use either the price indicators approach or the alternative pass through approach. The alternative pass through approach may be used where the licensee deems the price determined by the Price Indicators approach to be materially lower or higher and impacts negatively on its business.

6.2 NOVO Energy opted to use the "Pass-Through Approach" justifying that such an approach is more reflective of their operations as they buy gas from Sasol Gas at a given cost and then build their costs from this purchase price.

6.3 In selecting the pass through approach, NOVO Energy indicated that it has no control over the price charged by Sasol Gas. NOVO Energy further justified that the price indicators approach posed a risk whereby the Sasol Gas price could increase more than the molecule price as calculated using the price indicators and this would result in a margin

squeeze for the gas trader. For instance, if NOVO Energy had opted to use the price indicators approach at the time of submitting its application, its gas energy price would have been R112/GJ. However, the company opted for a more cost reflective approach and used [redacted]/GJ, its purchase price from Sasol Gas. But then Sasol Gas increased its price in January 2013 and is now charging NOVO Energy [redacted]/GJ, which illustrates the riskiness of using the price indicators approach.

6.4 NERSA used the new gas price of [redacted]/GJ as a pass through in analyzing the application.

7. ASSESSMENT OF THE ELEMENTS OF THE TRADING MARGIN

7.1 To calculate the trading margin, the allowable revenue for the was determined using the formula:

Trading Margin= Allowable Revenue/Annual Volume

Where:

Allowable Revenue = ((Trading Regulatory Asset Base + Working Capital + Cost of Sales) x WACC) + Expenses + Tax +/- Claw back

7.2 The paragraphs below provide an analysis of each component of the allowed revenue formula.

Trading Regulatory Asset Base (TRAB)

7.3 According to section 3.6.1 of the maximum pricing methodology, trading licensees would normally not have piped-gas network assets, and if they do they would be insignificant. It also provides that such assets, referred to as piped-gas trading plant in service plus limited amounts of non-network assets referred to as the piped-gas general plant would form the RAB. The investment in RAB would be recovered through a nominal trading margin which therefore implies that the assets will not be adjusted for inflation as it is inclusive in the nominal WACC.

7.4 The summary for this is as follows:

Trading Regulatory Asset Base = Original Cost of Piped-Gas Trading Plant in Service + Original Cost of Piped-Gas General Plant - Accumulated Depreciation.

7.5 NOVO Energy's Benoni plant is still relatively new as it started operating in November 2012 and NOVO Energy applied for a TRAB of [redacted] million. NOVO Energy submitted the cost of building the Benoni Natural Gas Filling Station and split the cost into a Processing & Dispensing Unit at [redacted] million and a Storage Unit at [redacted] million.

7.6 NOVO Energy then submitted the cost of the processing and dispensing unit as its TRAB. NERSA used the submitted figures by NOVO Energy.

Depreciation

7.7 In accordance with section 2.2 of the maximum pricing 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.

7.8 Since the original cost and the remaining economic life of assets could be determined, the NERSA used the original/historical value to calculate the straight line depreciation cost.

7.9 NERSA used the straight line depreciation method and came out with the same figures as the applicant.

Operating Costs

7.10 According to section 3.6.2 of the maximum pricing 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.

7.11 In considering the NOVO Energy expenses, the 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.

7.12 NOVO Energy applied for operating expenses of [redacted] million. The expenses were split into [redacted] million being direct project expenses and [redacted] million being a portion of head office expenses/overheads. The head office expenses were split five-ways among the NOVO Energy projects. NERSA used the above principles and assessed each expense item. NOVO Energy is currently not yet required to comply with the Regulatory Reporting Manuals (RRM's) hence no Cost Allocation Manual (CAM) is available from NOVO Energy for NERSA use on how these costs are separated between operating expenses and capital projects/non –operational site.

7.13 NERSA used the figure as provided by the applicant of [redacted] million and the resultant maximum price was unrealistically high when compared to what the applicant actually plans to charge. Although NOVO Energy is not yet required to comply with RRMs, NERSA assessed the application ensuring compliance with the RRMs. NERSA amended the operating costs by capitalising a proportion of them. In capitalising the expenses, Guidance is provided in the RRM's Volume 3: Piped-gas section 1.3 (30) that describe regulatory assets/debits. "*They are assets that arise from tariff setting/approval actions/decisions of the Energy regulator. Regulatory assets/debits arise from specific revenues, expenses, gains or losses that would have been included in net income assessment in one period under the general requirements of the RRM. However, due to the Energy Regulator decision, such items are deferred and instead will be included in a different period for purposes of developing the tariffs the licensee is authorised to charge for its regulated service*".

7.14 NOVO Energy also applied for distribution and storage expenses and these were a pass through in the application.

Net working Capital (w)

7.15 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.

7.16 NOVO energy submitted a 30 day working capital figure calculated as one month's cost of gas. NOVO Energy applied for [redacted]. NERSA used the same 30 day method and adjusted for the increase in the cost of gas. NERSA used [redacted]. The 30 days reflect their normal business operating practices. NERSA used the 30 day working capital method as provided by the applicant as this is a reflection of efficiency on the part of the licensee that is being passed to the customers.

Table 2: Working Capital Calculation Summary:

Component	NOVO ENERGY	NERSA
a. Cost Price/GJ	[redacted]	[redacted]
b. Cost of Sales at volume [redacted] GJ)	[redacted]	[redacted]
c. Operating Cycle (360/30 days)	[redacted]	[redacted]
Working Capital (rands) =b/c	[redacted]	[redacted]

Tax (T)

7.17 In calculating 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.

7.18 NERSA used the flow-through tax approach to determine the estimated tax payable figure in the allowable revenue. The difference between this estimated flow-through tax and the actual flow-through tax will be subject to +/- claw-back in subsequent tariff period as per the methodology.

Weighted Average Cost of Capital (WACC)

7.19 NOVO Energy used the method articulated below in its WACC calculations:

$$WACC_{(no\ min\ al)} = \left[\left(\frac{E}{Dt+E}\right) * Ke_{(no\ min\ al)}\right] + \left[\left(\frac{Dt}{Dt+E}\right) * Kd_{(no\ min\ al)}\right]$$

Where:

E = equity

Dt = debt

$Ke_{(nominal)}$ = the nominal cost of equity

$Kd_{(nominall)}$ = the post tax nominal cost of debt using *(kd = r(f) + Dp)*

and

r(f)= risk free rate – RSA 10 year bond
Dp = NOVO ENERGY actual debt cost

7.20 In its application, NOVO Energy stated that it does not have equity but [redacted]. It stated that its actual cost of debt is [redacted] To calculate its WACC, NOVO Energy added its actual debt cost (pre-tax) to a spot risk free rate of [redacted] and used the total that is [redacted] as its WACC.

7.21 NERSA's analysis of how NOVO Energy calculated its WACC reveals that the result is not entirely accurate. What is stated correctly is that the company [redacted], but there is an error in the assessment of its cost of debt (kd).

7.22 In calculating the cost of debt, NOVO Energy added the risk free rate to its actual borrowing cost. However this is not accurate because when banks lend funds they add a debt premium (Dp) to prime or the risk free rate. Therefore NOVO Energy's actual debt costs were calculated adding a debt premium to the risk free rate and therefore should not add it again, as that would be double counting. NOVO Energy used the pre-tax debt cost in its application. NERSA methodology uses the post-tax cost of debt.

7.23 With respect to gearing, the Methodology prescribes a minimum debt ratio of 30% in the capital structure. Debt is a cheaper form of capital, therefore NERSA will use only the [redacted]

7.24 NERSA calculated the post tax cost of debt and [redacted] WACC [redacted].

Table 3: Comparison of NERSA and NOVO Energy's WACC:

	WACC Calculation Summary	NERSA	[1]NOVO*
	Elements Used In WACC	%	%
a	Ke	[redacted]	[redacted]
b	Kd	[redacted]	[redacted]
c	Weight of Ke	[redacted]	[redacted]
d	Weight of Kd	[redacted]	[redacted]
e	Tax rate	28	28
f	Risk free rate	0	7.5
g	Cost of Equity **(a*c)**	[redacted]	[redacted]
h	Cost of Debt **(b*(1-e)*d)**	[redacted]	[redacted]
	WACC **(g+h)**	[redacted]	[redacted]

*The NOVO figures in the above table are taken as they are from the application.

[redacted]

7.25 Therefore NERSA used a WACC of [redacted] and not the applicant's figure of [redacted]

8. IMPACT OF THE PROPOSED PRICE

8.1 A summary of the NOVO Energy application as calculated by NERSA is depicted in the table below. The figures below are the same as the NOVO Energy application figures except:

1. NOVO Energy used a cost price of [redacted]/GJ whereas NERSA adjusted the figure to the current price of [redacted]/GJ; and
2. NOVO Energy did not include tax whereas NERSA included taxation.

8.2 Although NOVO Energy does not have a trading licence for the Benoni plant, the NERSA has processed this application because the licence application to include the Benoni plant is currently being processed by NERSA.

8.3 The table below shows the projected sales volume at [redacted] gigajoules of energy which is 54% of the installed capacity of [redacted] gigajoules per year. Noteworthy is that the piped-gas price derived in this scenario

is the same as that described in section 5.5 in this document. It depicts the adjusted NOVO Energy maximum price of piped-gas figures from the application.

Table 4: NOVO Energy Maximum Price Summary Calculation Scenario 1

Components	Annual Sales Volumes (GJ)	Annualised costs (R)	Maximum Price (R/GJ)
Gas Energy price **plus**	[redacted]	[redacted]	[redacted]
Operating Expenses **plus**	[redacted]	[redacted]	[redacted]
Recoverable Investment	[redacted]	[redacted]	[redacted]
Gas Price before discount		[redacted]	[redacted]
Add Distribution and Storage Expenses		[redacted]	[redacted]
Gas Price before discount		[redacted]	**417.70**
Discount%		[redacted]	0.0%
Total Price charged		[redacted]	**417.70**

8.4 The table also shows that the price of piped-gas is largely being driven upwards by high operating expenses. In comparison, the average operating expenses per gigajoule for listed companies that market gas is around 5% of the gas selling price whereas the projected operating expenses under discussion are [redacted]% of the gas selling price, reflecting that NOVO Energy is still in the business development phase and is incurring high market entry costs. Thus, NOVO Energy is purchasing gas from Sasol at [redacted]/GJ and as stated in this proposal, would like NERSA to approve a maximum price of R417.70/GJ; that is with a mark-up gap of [redacted] from the purchase price which is too high.

Viability of Maximum Price and Deferral of expenses

8.5 The reason for the very large gap between the purchase price and requested maximum price is that NOVO Energy is a new operation and it is still ramping up its volumes whilst incurring high market development costs as expected as they are introducing a new concept to a mature and capital intensive industry of providing vehicle fuel.

8.6 Therefore passing through costs at this stage would result in a very high maximum price in the early phase (when volumes are being ramped up) and lower maximum prices in later years. The R417.70/GJ maximum

price of piped-gas is unrealistically high in relation to the actual price to be charged.

8.7 In discussions conducted with the NOVO Energy management related to the price application, it was revealed that NOVO Energy is currently charging its customers [redacted].

8.8 This means that there is a natural price cap for the company to be attractive as an alternative source of vehicle fuel.

8.9 Certain issues to be considered in the above analysis of the NOVO Energy application are pointers that the operating expenses submitted in the application are above the expenses that NOVO Energy would incur when operating at optimum levels. For instance, the volume in the tariff period will be [redacted] of the installed capacity of the station. And NOVO Energy management reported that head office costs apportioned to the Benoni station, whose application is the one under consideration, are 20% of head office costs because in the short to medium term, the company expects to operate five stations. NOVO Energy is currently licensed to operate 10 sites. Furthermore, NOVO Energy is currently not yet required to comply with the Regulatory Reporting Manuals (RRM's). Therefore NERSA is proposing a scenario where a proportion of the operating expenses are capitalised. The expenses will be included in the RAB and will be recovered over five years through straight line ammortisation.

8.10 Capitalising a portion of the costs would remove the large gap between the maximum price and the actual price. This is advantageous to the applicant in that its price is levelled over a longer period whilst enabling it to recover all its efficiently incurred costs. This is also advantageous to

customers as it lowers the maximum price that can be charged by NOVO Energy.

8.11 NERSA then calculated the new maximum price with capitalised expenses.

8.12 Only [redacted] of the expenses (corresponding to the projected capacity) were included in the current maximum price assessment. The remainder were capitalised and added to the RAB.

8.13 The table below shows two scenarios. **Scenario 1** depicts the NOVO Energy maximum price as per the application whilst **scenario 2** illustrates the maximum price calculated by NERSA taking into account capitalised expenses:

Table :5 NOVO Energy Maximum Price Summary Calculations

Components	Scenario 1 Annualised costs (R)	Scenario 1 Maximum Price R/GJ	Scenario 2 Annualised costs (R)	Scenario 2 Maximum Price R/GJ
GE Price (at [redacted] GJ/year) plus	[redacted]	[redacted]	[redacted]	[redacted]
Operating Expense plus	[redacted]	[redacted]	[redacted]	[redacted]
Recoverable Investment	[redacted]	[redacted]	[redacted]	[redacted]
Gas Price before discount and other expenses *plus*	[redacted]	[redacted]	[redacted]	[redacted]
Distribution and Storage Expenses	[redacted]	[redacted]	[redacted]	[redacted]
Gas Price before discount	[redacted]	**417.70**	[redacted]	**334.25**
Discount%	[redacted]	0.0%	[redacted]	0.0%
Total Price charged	[redacted]	**417.70**	[redacted]	**334.25**

8.14 [redacted]

[redacted] This means that the vehicle fuel price would have to rise to R18.18/ litre for NOVO Energy to charge the maximum price. Such an occurrence is highly unlikely in the given application period of January 2013 to December 2013.

8.15 This new price of R334.25/GJ would allow the applicant a gap of [redacted] from its current price of [redacted] GJ. The gap gives the applicant room to adjust [redacted].

9. CONCLUSION

NERSA concluded and decided:

- that NOVO Energy must amend its application for the maximum price of piped-gas for the period 01 January 2013 to 31 December 2013 in accordance with Section 2.3.1 of the Methodology to Approve Maximum Prices of Piped –Gas in South Africa.