

5 April 2012

Mr James Cox
Chief Executive Officer
Independent Pricing and Regulatory Tribunal
PO Box Q290, QVB Post Office,
Sydney NSW 1230

Dear Mr Cox,

CARBON COMPONENT OF GAS RETAIL PRICES FROM 1 JULY 2012

ActewAGL Retail (ActewAGL) is the standard supplier of natural gas in Queanbeyan and Palerang, the Capital Region (comprising Boorowa, Goulburn, Yass and Young) and Shoalhaven.

The *Clean Energy Act 2011* and its accompanying legislative package, including a carbon pricing scheme, received royal assent on 18 November 2011.

In accordance with the current Voluntary Transitional Pricing Arrangements (VTPA) from 1 July 2010 – 30 June 2013, ActewAGL intends to vary its default gas prices and incorporate a 'Carbon Component' in its 2012-13 tariffs in NSW.

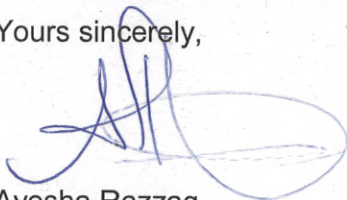
Under clause 4.10, the VTPA requires ActewAGL to advise the Independent Pricing and Regulatory Tribunal ("the Tribunal") of the calculation of the Carbon Component no later than two months before the proposed price increase (1 May for a 1 July increase).

ActewAGL must provide the Tribunal with sufficient information to demonstrate how the Carbon Component has been calculated, and provide justification that the adjustment is reasonable.

In this submission, ActewAGL explains the methodology that it has used for estimating the carbon costs using the latest published National Greenhouse Accounts Factors (July 2011). ActewAGL has provided information on the calculation of the Carbon Component in Attachment 1, and information on the impact on customers' annual gas bills in Attachment 2.

Should you have any queries regarding this matter, please contact Mr David Graham, Director Regulatory Affairs and Pricing on 6248 3605.

Yours sincerely,



Ayesha Razzaq
General Manager

Attachment 1

1. Introduction

On 18 November 2011, the Clean Energy Act 2011 and its accompanying legislation, received royal assent.

The Clean Energy Act 2011 is the result of a lengthy process to introduce a scheme aimed at targeting a reduction in carbon emissions. The original Carbon Pollution Reduction Scheme was proposed by the Commonwealth Government in 2008 as a cap-and-trade emissions trading scheme, however the legislation for this scheme was rejected twice and further amended in 2010 before being deferred.

The current scheme, the Clean Energy Act 2011 consists of 18 bills and uses much of the content of the original CPRS legislation in its development.

Clause 3.1 (b) of the VTPA provides that “on and from the commencement of a Carbon Pollution Reduction Scheme: the Default Prices will be comprised as follows:

R + N + C

where:

- R refers to the Retail Component;
- N refers to the Network Component; and
- C refers to the Carbon Component.”

Clause 6.1 (b) defines a Carbon Pollution Reduction scheme as “a mandatory scheme enacted or a carbon tax imposed by the Commonwealth of Australia after 1 July 2010 for the purpose of reducing greenhouse gas emissions, including but not limited to an emissions trading scheme”.

ActewAGL therefore considers that the commencement of the Clean Energy Act 2011 enables a Carbon Component to be included in default gas prices from 1 July 2012.

2. Carbon Component

Under the Clean Energy Act 2011, the activities which produce greenhouse gas emissions along the natural gas supply chain will incur a cost. In the gas industry, greenhouse gas emissions can be considered as occurring at two stages along the supply chain:

- Upstream – resulting from direct and indirect emissions from production and transmission; and
- Downstream – resulting from fuel combustion by end users.

The cost impact of greenhouse gas emissions associated with these two stages of the supply chain will form the main portion of the Carbon Component.

In addition, ActewAGL expects the introduction of the Clean Energy Act 2011 to result in an increase in bad debts. ActewAGL proposes that this increase in its

operating cost, along with an allowance to maintain the percentage retail margin, be included as part of the Carbon Component.

3. Network carbon costs

ActewAGL notes that there will also be liability for greenhouse gas emissions incurred by the distribution (network) system. ActewAGL expects that these carbon costs will be incorporated into the relevant network provider's network charges in each region, and passed through as the Network Component (N).

4. Upstream carbon cost

As the Tribunal is aware, ActewAGL has outsourced the management of wholesale gas purchases to AGL Wholesale Gas Ltd (AGL) to enable ActewAGL to better manage its risks, and benefit from economies of scale that it could otherwise not obtain. Pursuant to the Wholesale Gas Supply Agreement (WGSA) dated 3 October 2000, ActewAGL has sought information from AGL on the impact on the cost of delivered natural gas in NSW.

AGL provided ActewAGL with formal advice on 23 March 2012 which sets out the carbon costs associated with the production and haulage of gas to the ActewAGL city gate (which AGL intends to pass on to ActewAGL).

AGL has advised that "the upstream carbon cost of gas supplied by AGL to ActewAGL for NSW, pursuant to the WGSA, is proposed to be \$0.34/GJ (excluding GST) for 2012/13".

Methodology

In the absence of estimates from its suppliers, AGL has developed a methodology to estimate the impact of the carbon pricing mechanism on the delivered cost of natural gas. This methodology is detailed in the formal advice which AGL provided to ActewAGL.

ActewAGL understands that AGL used the same methodology to estimate the upstream cost of carbon in its submission to the Tribunal on 6 March 2012.

AGL has used the most recent¹ Scope 3 emission factors for natural gas usage in the National Greenhouse Accounts Factors (NGA Factors), as published by the Department of Climate change and Energy Efficiency, as the most appropriate, publicly available estimate of upstream emissions for natural gas supplied to a small customer in NSW or the ACT Region.

The relevant NGA Factors are provided in Table 1 below:

¹ Department of Climate Change and Energy Efficiency, National Greenhouse Accounts Factors – July 2011. Website accessed 28 February 2012:
<http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx>

State or Territory	Natural Gas EF for Scope 3	
	Metro ³	Non-Metro
	(kg CO ₂ -e GJ)	(kg CO ₂ -e GJ)
New South Wales and ACT	14.2	15.0

Table 1: Scope 3 emission factors, Table 37: Scope 3 emission factors - gaseous fuels, NGA Factors (July 2011)

In the NGA Factors, the Scope 3 emission factor is 14.2 kg CO₂-e/GJ for the metro regions, and 15.0 kg CO₂-e/GJ for non-metro regions. AGL supplies natural gas to ActewAGL in both regions.

Based on ActewAGL's mass market gas load forecast in the latest 2012/13 budget (excluding Canberra load), a load-weighted average NGA factor of 14.57 kg CO₂-e/GJ is obtained.

Subclause 100 (1) of the Clean Energy Act 2011 establishes that the cost of a carbon unit for surrender is \$23 per unit for 2012/13. Each unit is equivalent to one tonne of carbon dioxide equivalent (CO₂-e). Using the weighted-average Scope 3 emission factor, the upstream carbon cost in 2012/13 will be \$0.34/GJ (excluding GST) i.e. 14.57 x \$23/1000.

5. Downstream (fuel combustion) carbon cost

Under the Clean Energy Act 2011, liability is imposed on a natural gas supplier for the potential greenhouse gas emissions embodied in the natural gas which it supplies. For a supplier to be liable, the following tests must be satisfied:

- The natural gas supplier supplies an amount of natural gas to another person;
- It may reasonably be expected that the natural gas is for the use of the other person;
- The natural gas is withdrawn from a natural gas supply pipeline for the purpose of the use; and
- The other person did not quote an Obligation Transfer Number (OTN) (that is accepted by the supplier) in respect of the supply.

The supply of natural gas to small customers in NSW will clearly satisfy these tests. In that case, a gas retailer's carbon unit liability per GJ will be based on the amount of gas consumed by a customer.

The amount of greenhouse gas emitted by end users has been established in the National Greenhouse and Energy Reporting (Measurement) Determination 2008 in Part 2 of Schedule 1. These measurements are also referred to in the NGA Factors (July 2011). Table 2 below shows the emission factors of CO₂ equivalents from greenhouse gas components of natural gas as set out in Table 2 on page 14 of the NGA Factors.

Table 2: Emission factors for the consumption of natural gas, NGA Factors (July 2011)

Fuel combusted	Energy content factor (GJ/m ³ unless otherwise indicated)	Emission factor kg CO ₂ e/GJ (relevant oxidation factors incorporated)		
		CO ₂	CH ₄	N ₂ O
Natural gas distributed in a pipeline	39.3 x 10 ⁻³	51.2	0.1	0.03

The emission factors in Table 2 total 51.33 kg/GJ. Given a carbon price of \$23 per unit for 2012/13, the downstream carbon cost will be \$1.18/GJ (excluding GST).

6. ActewAGL Retail's total direct carbon costs

ActewAGL Retail's total direct carbon cost is comprised of the upstream and downstream carbon costs. Based on the NGA Factors and a carbon price of \$23/tonne, the total carbon cost for 2012/13 will be \$1.52/GJ (excluding GST).

Table 3: Total direct carbon costs (excluding GST)

	NGA Factor kg CO₂e/GJ	Carbon cost \$/GJ
Upstream emission	14.60	\$0.34
Downstream emission	51.33	\$1.18
Total direct carbon costs	65.93	\$1.52

7. Retail cost allowance

As previously noted, ActewAGL proposes to include an allowance for increased bad debts as a result of the introduction of carbon pricing. ActewAGL estimates this cost to be \$0.015/GJ.

8. Retail margin adjustment

ActewAGL proposes an uplift adjustment of 8% to be added to the direct carbon costs and incremental retail cost allowance to compensate for the reduction in percentage retail margin. This adjustment is consistent with the recommended reasonable range for retail margin of 7.3% - 8.3% in IPART's final report 'Review of regulated prices and charges for gas 2010-13', June 2010.

9. Proposed Carbon Component

The following table demonstrates the composition of the proposed Carbon Component for each of ActewAGL's NSW regions (resulting from direct carbon costs from upstream and downstream emissions, additional carbon related operating costs from increase to bad debts and an adjustment for retail margin).

It is intended that the Carbon Component will be added to the usage rate only.

Table 4: Proposed Carbon Component (excluding GST) for ActewAGL's NSW regions

Carbon cost (\$/GJ excl GST)	Capital	Queanbeyan	Shoalhaven
Total direct carbon costs	\$1.520	\$1.520	\$1.520
Carbon related retail cost	\$0.015	\$0.015	\$0.015
Retail margin adjustment	\$0.123	\$0.123	\$0.123
Total carbon cost	\$1.66	\$1.66	\$1.66

Attachment 2

Customer impact

The following tables demonstrate the customer impact of the proposed Carbon Component in ActewAGL's three NSW regions.

The proposed Carbon Component will increase the annual bill to an average residential customer (using 26GJ a year) in the Capital region by \$48 (including GST) in 2012/13, or 6.7% per annum before any other changes such as network price increases.

The proposed Carbon Component will increase the annual bill to an average residential customer in the Queanbeyan region (using 46GJ a year) by \$84 (including GST) in 2012/13, or 7.6% per annum before any other changes such as network price increases.

The proposed Carbon Component will increase the annual bill to an average residential customer (using 16GJ) in the Shoalhaven region a year by \$29 (including GST) in 2012/13, or 5.5% per annum before any other changes such as network price increases.

Capital	Usage GJ/year	Carbon Component (\$ pa incl GST)	Bill based on 2011/12 prices (\$ pa incl GST)	% increase
Home Gas plan	26	\$ 48	\$ 709	6.7%
Home Saver Gas plan	39	\$ 71	\$ 965	7.4%
Home Saver Plus Gas plan	62	\$ 113	\$ 1,377	8.2%
Residential	39	\$ 70	\$ 954	7.4%
Industrial & commercial	171	\$ 311	\$ 3,182	9.8%

Queanbeyan	Usage GJ/year	Carbon Component (\$ pa incl GST)	Bill based on 2011/12 prices (\$ pa incl GST)	% increase
Home Gas & Home Saver Gas plan	46	\$ 84	\$ 1,113	7.6%
Home Saver Plus Gas plan	66	\$ 120	\$ 1,456	8.2%
Residential	48	\$ 87	\$ 1,141	7.6%
Industrial & commercial	309	\$ 563	\$ 5,628	10.0%

Shoalhaven	Usage GJ/year	Carbon Component (\$ pa incl GST)	Bill based on 2011/12 prices (\$ pa incl GST)	% increase
Home Economy Gas plan	16	\$ 29	\$ 526	5.5%
Home Transition Gas plan	6	\$ 11	\$ 334	3.2%
Residential	15	\$ 28	\$ 510	5.4%
Industrial & commercial	521	\$ 951	\$ 10,654	8.9%