

## **Bord Gáis Energy Supply Proposals for Gas Pricing in the Competitive Market Sector**

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### **1. Background**

The Gas (Interim) (Regulation) Act 2002 and a Ministerial Order issued in November 2002<sup>1</sup> have created a newly eligible market sector, i.e. for single meters consuming between 500,000 and 25,000,000 standard cubic metres (“scm”) per annum. (i.e. between approximately 181,000 and 9,000,000 therms p.a.). Bord Gáis Energy Supply (BGS) is currently the incumbent supplier in the newly eligible sector of the market.

Under the direction of the CER, market arrangements have been put in place in late 2002 to facilitate new market entry and thus provide the basis for choice of supplier for these newly eligible natural gas customers. The development of competition requires that the role of BGS within this market sector be addressed. It will also require that pricing be on a market reflective basis as new market participants aim to recover their costs. Experience from 1996 in the market over 25,000,000 scm has demonstrated the development of significant competition, with the power generation sector particularly procuring its supplies from varied sources.

### **2. Purpose of Proposals**

The purpose of this document is to set out a methodology for both price and structure of the contractual arrangement to be made available by BGS to all “newly eligible customers”. It also implicitly sets out the role of Bord Gáis Supply (BGS) in this sector in that its pricing in the eligible sector will be subject to regulation.

The paper sets out a transparent mechanism that will allow eligible gas customers to determine gas costs on a forward-looking basis for periods from one month up to twelve months ahead. It will also provide a clear target for new market entrant

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<sup>1</sup> (S.I. No. 545 of 2002)

suppliers to match in providing supplies to customers. Absence of a market-based price could deter new market entry. The proposals will give confidence to market participants that price structures have been established in a robust manner and will be regulated until a competitive market has developed.

Thus the proposals will introduce contracts which:

(a) introduce market pricing into the sector based on

- principles of cost recovery,
- securing an industry-standard margin; and

(b) allow for transparency in the cost elements.

### **3. New Pricing Proposals**

For the purposes of the current pricing proposal the market can be considered as three separate sectors for:

3.1 Newly Eligible Customers using between 500,000 and 25,000,000 scm pa,

3.2 Customers consuming over 25,000,000 scm per annum, and

3.3 Eligible customers consuming less than 500,000 scm per annum (for gas fired generation i.e. CHP sites).

3.4 The pricing proposals for various sectors are as follows: -

3.4.1 For Customers using between 500,000 scm/annum and 25,000,000 scm/annum at a single meter installation, a new Regulated Tariff Formula (RTF) is proposed. The structure of the RTF is detailed in Appendices 1 and 2.

Implementation of the RTF is discussed in Sections 10 and 11 below.

3.4.2 Customers using more than 25,000,000 scm per annum are excluded from RTF Proposals as choice of supplier is already well established.

3.4.3 Eligible customers using less than 500,000 scm per annum (i.e. using natural gas for electricity generation) will be supplied at the most appropriate Franchise tariff rate<sup>2</sup> (or may choose to be supplied by an alternative supplier to BGE).

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<sup>2</sup> Note:- For the purposes of the RTF, Eligible Customers excludes electricity generators using less than 500,000 scm per annum.

#### **4. Implementation of RTF**

##### **4.1. Separation of Franchise and Competitive Pricing Structures**

Eligible customers (other than electricity generating customers using less than 500,000 scm/annum) will not be entitled to avail of Franchise tariffs. Franchise customers (using less than 500,000 scm/annum) will not be entitled to the RTF.

##### **4.2. Replacement of Franchise tariffs by Competitive Pricing Structure**

Other than in circumstances where a specific contract with a defined expiry date exists, all existing pricing arrangements with eligible customers (including expired contracts) will be replaced by the Regulated Tariff Formula (RTF) with effect from April 1<sup>st</sup> 2003. All other pricing arrangements with eligible customers will be replaced by the RTF on expiry of current agreements.

##### **4.3. Detailed Contract Proposal**

Detailed formulae for energy and transportation charges are shown in Appendices 1, 2 and 3.

#### **5. Estimation of Peak Day for Eligible Customers**

It is expected that all eligible sites will be fitted with daily metering during 2003. Where daily data does not exist, the peak day will be calculated by reference to monthly consumption data. The actual value will be based on highest average daily value recorded in any month. The pattern of utilisation within the month will also be applied. For example, hospitals function on all days in the month while some factories may operate to a five-day week. Information will be sought from customers to establish as far as possible accurate information on peak days. Final estimates of peak days will be agreed with the Transmission and Distribution Transporter as appropriate. The calculation method is shown in Appendix 4.

**6. Soft Landing**

It is expected that there will be a “soft landing” period for each individual eligible customer until such time as information on peak winter days has been established, as specified in CER 02185 and the Interim DCOP.

**7. BGS Peak Day Estimate**

BGS will estimate the Peak Day subject to:

- The proposed soft landings being implemented
- Reasonable disclosure of information by the customer (e.g. planned expansions which could impact on peak day); and
- Agreement with the Transporter on the individual capacity to be allocated to each customer.

**8. Change of Supplier**

In cases where the customer changes supplier, BGS will be entitled to transfer responsibility for payment of capacity charges calculated with reference to a Moffat Entry point, on a “pro rata” basis to the incoming shipper.

**9. Access to Peak Day and Consumption Information**

It is assumed that all relevant information relating to estimation of peak days and/or consumption profiles for eligible customers will be available through the GPRO to customers and other market participants, subject to appropriate customer consent.

## **10. Customers Transferring to RTF from April 1<sup>st</sup> 2003**

- 10.1.** All eligible customers currently supplied on DC1 or DC2 rates without specific expiry dates, or customers whose contracts have expired prior to April 1<sup>st</sup> 2003 will be offered a fixed price contract of 1 year's duration, based on forward gas prices for the period April 2003 to March 2004<sup>3</sup>. (Arrangements for customers with firm current contracts will continue unchanged until expiry of those contracts).
- 10.2.** These customers will have the option to terminate the initial RTF contract on 30<sup>th</sup> April, 30<sup>th</sup> June, 30<sup>th</sup> September or 31<sup>st</sup> December 2003.
- 10.3.** Where a customer terminates the initial RTF to avail of a fixed 3 Month contract from the 1<sup>st</sup> July, the contract commencing on either July 1<sup>st</sup> shall be priced as a 6 month RTF but with the option to terminate on 30<sup>th</sup> September 2003.
- 10.4.** Where a customer terminates the initial RTF on 30<sup>th</sup> April to avail of any other BGS contract, the terms and conditions of the original RTF shall apply until 30<sup>th</sup> June at the earliest. One month's notice will be required prior to termination of these contract arrangements by either the customer or BGS. An exception to this condition applies to customers wishing to terminate the initial RTF contract on 30<sup>th</sup> April. In this instance a termination period of 1 week only is required, i.e. by April 25<sup>th</sup>.
- 10.5.** BGS will have no option to terminate this contract.
- 10.6.** Any dispute with any customer regarding his eligibility to obtain RTF or the price offered under RTF may be referred to the Commission for determination.
- 10.7.** The customer may avail of a Monthly Variable RTF contract where the gas commodity price tracks market prices on a monthly basis.
- 10.8.** Monthly variable RTF contracts will be of 12 months duration.
- 10.9.** In all cases, changes in Transportation charges will be subject to adjustment from the date of implementation of change by the relevant Transporter(s).

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<sup>3</sup> There are no supply contracts which expire between April 1<sup>st</sup> 2003 and June 30<sup>th</sup> 2003.

**11. Customers Transferring to RTF on Expiry of Current Contracts.<sup>3</sup>**

- 11.1. As and when contracts expire, BGS will offer a choice of contracts, with durations of 3-month, 6-month, 9-month or 12- months.
- 11.2. The customer may be entitled to a Price Cap if the 12-month RTF price<sup>4</sup> is greater than 115% of the current DC2 Tariff (including standing charge). See Section 12 for details of the operation of the Price Cap.
- 11.3. The RTF Short-term Contract Price shall be set by the forward gas prices for the contract period (if the proposed contract period is less than 12 Months).
- 11.4. Where a customer avails of a fixed 3 Month contract on 1<sup>st</sup> July, the contract shall be priced as a 6 month RTF but with the option to terminate on 30 September 2003.
- 11.5. Contracts may commence on the first day of any month from, and including, 1st July 2003.
- 11.6. Customers will be offered a choice of Monthly Price Adjustment (as outlined in Appendix 1), Quarterly Price Adjustment or a Fixed Commodity Price (as outlined in appendix 2) for the duration of the contracts.
- 11.7. Where a customer opts for Non-Monthly Price Adjustment, the commodity price will be based on the forward market prices and forward exchange rates for the period for which the price is to be fixed.
- 11.8. In all cases, changes in Transportation charges will be subject to adjustment from the date of implementation of change by the relevant Transporter(s).
- 11.9. In all cases one month's notice will be required prior to termination of these contract arrangements by either the customer or BGS. This provision will only apply outside the specified termination date of a contract.

## **12. Price Cap**

- 12.1.** Where a customer is transferring from DC1, the price shall be the lower of the RTF calculated price<sup>4</sup> or the current published DC1 rate (including the standing charge at each premises) plus 15%.
- 12.2.** Where a customer is transferring from DC2, the price shall be the lower of the RTF calculated price<sup>4</sup> or the current published DC2 rate (including the standing charge at each premises) plus 15%.
- 12.3.** Where a customer is transferring to RTF on April 1<sup>st</sup> 2003 from an expired contract, the price shall be the lower of the RTF calculated price<sup>4</sup> or the current published DC 2 rate (including the standing charge at each premises) plus 15%.
- 12.4.** When a customer is transferring to RTF after April 1<sup>st</sup> 2003, the value of the Price Cap (if any) shall be determined by reference to the 12-month RTF price at contract expiry and current DC2 tariff plus 15%, and compared with the value of the RTF Price Cap (if any) for the same customer on April 1<sup>st</sup> 2003. The Price Cap with the lower value shall apply.
- 12.5.** The Price Cap will apply only to gas sold between April 1<sup>st</sup> 2003 and March 31<sup>st</sup> 2004.
- 12.6.** If a customer terminates the initial RTF contract, the Price Cap shall not apply to any subsequent contract with BGS.
- 12.7.** The value of this Price Cap will be apportioned relative to a 12-month contract and provided to the customer as a monthly credit, having been calculated based on an estimated annual bill. A reconciliation will be done at the end of the contract period to reflect actual volumes and transportation charges. All calculation are performed exclusive of VAT. (See appendix 5 for a worked example).
- 12.8.** A Price Cap does not apply to the monthly variable RTF.
- 12.9.** A customer may switch from Monthly Price Adjustment (where there is no entitlement to a Price Cap) to a Non-Monthly Price Adjustment subject to a one-month notice period. Exercise of this option will not entitle any customer to a Price Cap.

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<sup>4</sup> The RTF will be based on IPE forward prices for gas, transportation charges, exchange rates and other costs applying on February 20<sup>th</sup> 2003.

**12.10.** A customer *may not* switch from Non-Monthly Price Adjustment to Monthly Price Adjustment without the agreement of BGS during the period of an existing Non-Monthly Price Adjustment agreement between BGS and that customer. Any Price Cap will terminate under these circumstances.

**12.11.** In all cases, changes in Transportation charges will be applied to any Price Cap from the date of implementation of change by the relevant Transporter(s).

### **13. Multiple Premises Customers**

13.1 Where a customer has a number of premises under a single contract at present, and where some of the premises are Eligible, BGS will offer individual contracts to each eligible site.

13.2 The most economic applicable franchise tariff will be offered to the customer for each individual remaining non-eligible sites.



## Appendix 1 - Regulated Tariff Formula Monthly Price Adjustment

$$\mathbf{Pm} = [(\mathbf{IPEm\ Index} + \mathbf{Tuk} + \mathbf{Psw}) * \mathbf{GBP/EUR}] + \mathbf{Tti} + \mathbf{Tdi} + \mathbf{Si} + \mathbf{Fixed\ Charges}]$$

Where **Pm** = the price of gas in Month M expressed in cent per therm

**IPE Index** = as published by the IPE and is defined as the average of IPE NBP futures settlement prices for Month M for each business day of Month M-1 up to and including the second last business day of Month M-1.

**Tuk** = UK transportation charges, adjusted quarterly. The make-up of UK transportation charges are shown in Table 1, Appendix 3

**Psw** = Swing Premium<sup>5</sup>

(Note: **Tuk** and **Psw** will be updated and published, subject to approval by the CER, quarterly to take account of changes to shrinkage, UK transportation charges and the cost of flexibility.)

**GBP/EUR** = The average of the Sterling Euro exchange rate for each business day of Month M-1 as quoted by AIB Bank.

**Tti** = Transportation charges for the Irish Interconnectors and on-shore Ireland Transmission System -See “Capacity Pricing “ below

**Tdi** = Transportation charges for the Irish Distribution System -See “Capacity Pricing “ below

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<sup>5</sup> A charge is applied to within month swing at a rate of 0.15pSt per 10% swing subject to a maximum swing charge of 1.0pSterling. In the absence of daily profile data for non daily read customers, the following within month swings are assumed for the following categories of customers within the competitive market.

180-700k therms pa at 140% swing per month (swing cost = 0.15 x 4 = 0.60 p St)  
700k-5m therms pa at 130% swing per month (swing cost = 0.15 x 3 = 0.450 p St)  
5m-9m therms pa at 120% swing per month (swing cost = 0.15 x 2 = 0.30 p St)

(Note : In the case of both Tti and Tdi the monthly charge can be divided by the monthly volume to arrive at a c/therm charge).

**Si** = Shrinkage charges on the Irish System, adjusted monthly and shown in Appendix 3, Table 2

**Fixed Charges** = a fixed charge to cover BGE operating costs, and margin, as shown in Appendix 3, Table 3.

**GBP/EUR** = The average of the Sterling Euro exchange rate for each business day of Month M-1 as quoted by AIB Bank.

## **Appendix 2 – Regulated Tariff Formula Non-Monthly Price Adjustment**

$$P_p = [(IPE_p + T_{uk} + P_{sw}) * GBP/EUR] + T_{ti} + T_{di} + S_i + \text{Fixed Charges}]$$

**P<sub>p</sub>** = the price of gas in Period P expressed in cent per therm

**IPE<sub>p</sub>** = The weighted average (based on customer profile) of the IPE futures settlements prices as published by the IPE for the relevant period P on the specified business day preceding any price adjustment date.

**GBP/EUR** = The Sterling/Euro exchange rate as quoted by AIB at the close of business on the specified business day preceding any price adjustment date.

**All other terms as in Appendix 1 above.**

## Appendix 3 - Capacity Pricing for RTF

### Two Types of Customers

1. **Transmission Connected-** incur charges for the use of the Irish gas transmission system as published by CER (Tti).
2. **Distribution Connected-** incur charges for the use of the Irish gas transmission system and charges for the use of the Irish Distribution System (Tdi) as approved by CER.

Within each category there are two further sub-categories, namely

- Daily Metered
- Non Daily Metered

**Daily metered customers** will be charged on the basis of daily readings, where sufficient daily data exists to allow such charges to be calculated.

**All Others** will be charged on the basis of calculations agreed by BGS with the Distribution Transporter or notified to BGS by the Distribution Transporter.

### Capacity Charging

*All Capacity Charges to be billed as a Monthly fixed charge (Standing Charge)*

#### 1) Transmission

##### a) *Customers Peaking in the Winter (Dec to Mar)*

⇒ Average of the 5 Winter Peak Days \* Full Transmission Tariff

##### b) *Customers Peaking in the Summer (Apr to Nov)*

⇒ Average of the 5 Winter Peak Days \* Full Transmission Tariff

Plus

(Average of the 5 Summer Peak Days minus Average 5 winter Peak Days)

\* 50% of Transmission Tariff

2) **Distribution**

• **Daily Metered**

c) *Customers Peaking in the Winter (Dec to Mar)*

⇒ Transmission tariff charge as per Daily Metered above

Plus

Peak day as advised by Transporter (GPRO) \* Full Distribution Tariff

d) *Customers Peaking in the Summer (Apr to Nov)*

⇒ Transmission tariff charge as per Daily Metered above

Plus

Peak day as advised by Transporter (GPRO) \* Full Distribution Tariff

• **Non Daily Metered<sup>6</sup>**

e) *Customers Peaking in the Winter( Dec to Mar)*

⇒ Transmission Tariff

Plus

Peak day as advised by or agreed with Transporter (GPRO) \* Full Distribution Tariff.

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<sup>6</sup> As Non Daily Meter (NDM) Customers will only be advised of Peak Day requirements the Summer Winter peaking differential cannot be applied.

**Appendix 3 Continued**

**Table 1**

**UK Transportation Charges (Sterling)**

UK Commodity Charges as published by Transco	0.0177	p/kWh
Moffat Exit Charge as published by Transco	0.0001	pppd KWhpd*
Moffat Agency Charges as published by Moffat	0.0003	p/kWh
Agent to be applied to both UK Shipper and Irish Shipper		

\*Pence per peak day kWh per day

**Table 2**

**Shrinkage Charges 2003/2004**

	Shrinkage Price	Estimated Throughput usage	Shrinkage Charge	Transportation Fee on Shrinkage Estimated
	c/th	1.80%	c/th	c/th
Apr-03	31.5		0.57	0.17
May-03	29.7		0.53	0.17
Jun-03	29.7		0.53	0.17
Jul-03	29.0		0.52	0.17
Aug-03	29.0		0.52	0.17
Sep-03	29.0		0.52	0.17
Oct-03	35.6		0.64	0.18
Nov-03	38.7		0.70	0.18
Dec-03	42.2		0.76	0.18
Jan-04	45.1		0.81	0.18
Feb-04	43.5		0.78	0.18
Mar-04	41.9		0.75	0.18
<b>Average</b>			<b>0.64</b>	<b>0.175</b>

Note:- Shrinkage charges are published by BGE Transportation for a 12 month period from Oct to Sep so fees from Oct 03 are estimated at this point

**Appendix 3 Continued**

**Table 3 – Fixed Charges**

**Proposed Schedule of Fixed Charges in RTF Contract**

	Winter c/kWh	Summer c/kWh	Shoulder c/kWh	Winter c/therm	Summer c/therm	Shoulder c/therm
180-700k therms	0.0728	0.0873	0.0748	2.133	2.559	2.192
700k–5m therms	0.0828	0.0809	0.0760	2.428	2.370	2.228
5-9m therms	0.0510	0.0311	0.0332	1.493	0.912	0.973

Winter defined as DJFM; Summer = JJAS; Shoulder = AMON

Schedule includes the recovery of margin at 1.3%

#### **Appendix 4: - Capacity Booking for Initial Market Opening**

For the avoidance of doubt BGS propose the following arrangements regarding the booking of transportation capacity during the initial market opening period. The proposed arrangements that will apply until sufficient data is available from the daily meters currently being installed on NEC sites to be able to positively establish peak daily capacity are provided below.

##### Calculation of Peak Daily Capacity

###### Option A:

Equation 1: [(NEC's peak month)/(Estimated working days in Month)]\*1.2

This formula to be applied equally to all NEC's including Heating (Temperature Sensitive) customers.

###### Option B:

For customers whose T ratio (defined below) is less than 3, Capacities will be calculated using regression analysis as follows:

Equation 2: [Quantity(kWh) for a given period] = [(slope 1 x days in period) + (slope 2 x Heating Degree Days for that period)]

Slopes 1&2 are calculated by regression analysis for each NEC.

Equation 3: [(slope 1)/(slope 2)] = T ratio

If T ratio is greater than 3, this indicates an extremely temperature sensitive customer and thus equation 2 is applied for a period of 1 day with peak Heating Degree Days.

If the T Ratio is less than 3, Equation 1 is applied as in Option A.

###### Comment:

The difference between option A and B in terms of value of total capacity booking is in the region of €250 K. On a total capacity booking of €130 million this equates to 0.2%. As such Option A is the preferred method of calculating capacity bookings for NEC's in the initial market opening period. In reality NEC's demand is likely to vary greater than 0.2% from year to year thus making the 0.2% difference between Options A & B academic.



## **Appendix 5 :- Worked Examples**

Four worked examples are shown in this appendix to illustrate how the Regulated Tariff Formula (RTF) prices are calculated and how price caps are determined.

**Example 1** shows the methodology used in calculating the end user price where the customer transfers to the RTF formula at 1<sup>st</sup> April 2003. The various components of the pricing structure are shown and based on the profile in the example this customer would be offered a Fixed Commodity price = 1.209 c/kwh for 12 months. This element of the contract is set for 12 months unless the customer opts to terminate the contract under the terms of the RTF introduction in the initial period.

In addition to the fixed commodity charge, there is pass-through of transportation and shrinkage charges. Any change in these elements will be passed on to the customer. At current published rates the weighted average price of all charges including commodity and pass-through elements in the example is 2.372 c/kwh.

- a) A price cap is available in this example as the Annual RTF price of 2.372 c/kwh is greater than the D&C2 tariff+15% price ceiling of 2.130 c/kwh. The example illustrates the methodology used to calculate the precise discount, which in this case is -0.2421 c/kwh (20% of the commodity price) giving a ceiling RTF price of 2.130 c/kwh.
- b) In the event that transport or other pass through charges increase during the course of the contract period these will be charged to the customer. There is no change in the level of price cap. Example 1b illustrates this with a scenario where transport charges increase by 10% at October 2003.
- c) In the event of a fall in transport or other pass through charges, this reduction will be passed through to the customer. The level of price cap is recalculated in these circumstances from the date of pass through charge implementation. Example 1c illustrates this calculation based on a 10% transport charge decrease scenario at October 2003.

**Example 2** uses the same detailed methodology as shown in example 1. In this case however the customer has an even consumption profile across the year. As a consequence both the commodity and transport components of the price are lower. The Fixed Commodity price = 1.138 c/kwh and the Annual RTF price = 1.961 c/kwh.

A price cap is not available in this case because the Annual RTF price of 1.961 c/kwh is less than the D&C2 tariff +15% price ceiling price of 2.124 c/kwh.

**Example 3** illustrates how a price cap is calculated for a customer that cannot avail of the RTF until after the 1<sup>st</sup> April because they have an existing contract. Eligibility for the price cap is determined by reference to the RTF rate at 1<sup>st</sup> April prices.

In this example the customers profile is the exact same as in example 1. The example further assumes that the commodity cost of gas has increased by 10% because of market movements at the time of the 12 month RTF contract offer.

The full discount rate applies in this case giving the same effective RTF price ceiling as in example 1.

**Example 4** also illustrates a customer currently in contract availing of the 12 month RTF after 1<sup>st</sup> April. In this case it is assumed that the commodity cost of gas has fallen by 10%. The effective RTF ceiling price remains the same as in examples 1 & 3. However the level of discount is reduced.

## Worked Example 1

**Scenario :** Customer is taking fixed 12 month RTF from 1st April - price cap applicable

Annual Volume (Mwh): 5941  
 Annual Peak Day (Mwh): 35.1  
 Winter Peak Day (Mwh): 35.1

### 1) 12 month commodity price excluding UK & Irish Transportation Charges and shrinkage

	IPE Stg p/therm	Swing Stg p/therm	Total UK Commodity Cost cent/kWh	Fixed Charges cent/kWh	Monthly Volume kwh	Monthly Commodity Costs €'s
Apr'03	16.6	0.60	0.863	0.075	483,685	€4,538
May	16.0	0.60	0.831	0.075	393,602	€3,566
Jun	15.6	0.60	0.815	0.087	283,005	€2,552
Jul	15.5	0.60	0.808	0.087	256,172	€2,294
Aug	16.1	0.60	0.837	0.087	189,522	€1,752
Sep	15.5	0.60	0.806	0.087	427,097	€3,816
Oct	19.5	0.60	1.009	0.075	441,334	€4,785
Nov	23.5	0.60	1.211	0.075	412,860	€5,308
Dec	26.4	0.60	1.357	0.073	890,480	€12,728
Jan '04	26.0	0.60	1.338	0.073	784,658	€11,069
Feb	26.0	0.60	1.338	0.073	714,817	€10,084
Mar	26.0	0.60	1.338	0.073	663,808	€9,364

**Totals** **5,941,039** **€71,856**

12 month commodity price (excluding UK & Irish Transportation Charges and shrinkage). Price in Sterling pence per therm = **24.08**

12 month commodity price in Euro cent per kWh = **1.209**

1 Therm = 29.3071 kwh Exchange based on 0.6794

### 2) Monthly price per kWh including Transportation Commodity charges, excluding Transportation Capacity charges

	12 month price cent/kWh	UK Transport cent/kWh	Transmission Commodity cent/kWh	Distribution Commodity cent/kWh	Shrinkage cent/kWh	Monthly cost per kWh excluding Capacity
Apr'03	1.209	0.027	0.037	0.127	0.025	1.426
May	1.209	0.027	0.037	0.127	0.024	1.425
Jun	1.209	0.027	0.037	0.127	0.024	1.425
Jul	1.209	0.027	0.037	0.127	0.024	1.424
Aug	1.209	0.027	0.037	0.127	0.024	1.424
Sep	1.209	0.027	0.037	0.127	0.024	1.424
Oct	1.209	0.027	0.037	0.127	0.028	1.429
Nov	1.209	0.027	0.037	0.127	0.030	1.431
Dec	1.209	0.027	0.037	0.127	0.032	1.433
Jan '04	1.209	0.027	0.037	0.127	0.034	1.435
Feb	1.209	0.027	0.037	0.127	0.033	1.434
Mar	1.209	0.027	0.037	0.127	0.032	1.433

### 3) Total Monthly delivered charges including fixed capacity charges

	Monthly Volume kWh	Unit rate c/kwh	Cost excluding Capacity	Transmission Capacity	Distribution Capacity	Total Monthly Costs
Apr'03	483,685	1.426	€6,897	€2,007	€2,656	€11,560
May	393,602	1.425	€5,608	€2,007	€2,656	€10,271
Jun	283,005	1.425	€4,032	€2,007	€2,656	€8,695
Jul	256,172	1.424	€3,649	€2,007	€2,656	€8,312
Aug	189,522	1.424	€2,699	€2,007	€2,656	€7,363
Sep	427,097	1.424	€6,083	€2,007	€2,656	€10,747
Oct	441,334	1.429	€6,305	€2,007	€2,656	€10,969
Nov	412,860	1.431	€5,907	€2,007	€2,656	€10,570
Dec	890,480	1.433	€12,759	€2,007	€2,656	€17,422
Jan '04	784,658	1.435	€11,256	€2,007	€2,656	€15,920
Feb	714,817	1.434	€10,247	€2,007	€2,656	€14,911
Mar	663,808	1.433	€9,510	€2,007	€2,656	€14,173

**Totals** **5,941,039** **€84,953** **€24,081** **€31,878** **€140,912**

Average unit delivered price in cent per kWh = **2.372**

Yellow shading indicates that data is subject to potential change.

## Example 1a - Initial Cap Calculation

### Annual D&C 2 +15% Ceiling Value at 1st April 2003

Passthrough Charges	€69,056	- from RTF calculations
Commodity Charges	€57,472	- derived balancing figure
Total Charge	<b>€126,528</b>	- calculated from tariff formula
Cost per kWh	2.130	

### RTF 12 Month Fixed Price Contract Value at 1st April 2003

Passthrough Charges	€69,056
Commodity Charges	€71,856
Total Charge	<b>€140,912</b>
Cost per kWh	2.372

**This Customer is eligible for a price Cap because the annual RTF price is greater than D&C2+15% at 1st April 2003.**

**The price cap is calculated as follows**

D&C2+15% Commodity Value =	€57,472
RFT 12 month fixed commodity value =	€71,856
Difference	<b>-€14,384</b>
Discount on commodity price until Mar'04 (Difference/Volume)=	<b>-0.242 c/kwh</b>

**A cap is available until the end of March 2004 provided that the customer remains on the original RTF fixed price contract. The cap remains unchanged unless there is a fall in passthrough charges.**

**Therefore in this customers case the monthly commodity charge would be**

12 Month RTF contract price =	1.2095 c/kwh
less D&C2+15% Discount	-0.2421 c/kwh
Effective Commodity Price	<b>0.967 c/kwh</b>

## **Example 1b : Cap Re-calculation**

**What if Transport Charges increase ?**  
**Assume 10% increase at 1st October 2003**

### **Annual D&C 2 +15% Ceiling Value at 1st April 2003**

	Allocation at 1st April	Increase at 1st Oct	Allocation at 1st Oct
Passthrough Charges	€69,056	€6,906	€75,962
Commodity Charges	€57,472	-€6,906	€50,567
<b>Total Charge</b>	<b>€126,528</b>	<b>€0</b>	<b>€126,528</b>
Cost per kWh	2.130		

### **RTF 12 Month Fixed Price Contract Value at 1st April 2003**

	Allocation at 1st April	Increase at 1st Oct	Allocation at 1st Oct
Passthrough Charges	€69,056	€6,906	€75,962
Commodity Charges	€71,856	€0	€71,856
<b>Total Charge</b>	<b>€140,912</b>	<b>€6,906</b>	<b>€147,818</b>
Cost per kWh	2.372		

**This Customer is eligible for a price Cap because the annual RTF price is greater than D&C2+15% at 1st April 2003.**

**The price cap calculated at the 1st of April remains unchanged**

D&C2+15% Commodity Value =	€57,472
RFT 12 month fixed commodity value =	€71,856
Difference	-€14,384
Discount on commodity price until Mar'04 (Difference/Volume)=	<b>-0.242 c/kwh</b>

**The increase in Transport Charges are passed through to the customer from when they occur.**

## **Example 1c : Cap-Recalculation**

**What if Transport Charges decrease ?**  
**Assume 10% reduction at 1st October 2003**

### **Annual D&C 2 +15% Ceiling Value at 1st April 2003**

	Allocation at 1st April	Increase at 1st Oct	Allocation at 1st Oct
Allocation to Passthrough Charges	€69,056	-€6,906	€62,150
Allocation to Commodity Charges	€57,472	€6,906	€64,378
<b>Total Charges</b>	<b>€126,528</b>	<b>€0</b>	<b>€126,528</b>
Cost per kWh	2.130		

### **RTF 12 Month Fixed Price Contract Value at 1st April 2003**

	Allocation at 1st April	Decrease at 1st Oct	Allocation at 1st Oct
Passthrough Charges	€69,056	-€6,906	€62,150
Commodity Charges	€71,856	€0	€71,856
<b>Total Charge</b>	<b>€140,912</b>	<b>-€6,906</b>	<b>€134,007</b>
Cost per kWh	2.372		2.256

**This Customer is eligible for a price Cap because the annual RTF price is greater than D&C2+15% at 1st April 2003.**

**However the level of price cap funded from the commodity charge is recalculated as**

D&C2+15% Commodity Value =	€64,378
RFT 12 month fixed commodity value =	€71,856
Difference	-€7,478
Discount on commodity price from Oct'03 to Mar'04 =	<b>-0.126 c/kwh</b>

**The decrease in Transport Charges are passed through to the customer from when they occur.**

## Worked Example 2

**Scenario :** Customer is taking fixed 12 month RTF from 1st April - no cap applicable

Annual Volume (Gwh): 6.4  
 Annual Peak Day (Mwh): 23.7  
 Winter Peak Day (Mwh): 23.7

### 1) 12 month commodity price excluding UK & Irish Transportation Charges and shrinkage

	IPE Stg p/therm	Swing Stg p/therm	Total UK Commodity Cost cent/kWh	Fixed Charges cent/kWh	Monthly Volume kwh	Monthly Commodity Costs €'s
Apr'03	16.6	0.60	0.863	0.075	574,152	€5,386
May	16.0	0.60	0.831	0.075	559,294	€5,067
Jun	15.6	0.60	0.815	0.087	522,813	€4,715
Jul	15.5	0.60	0.808	0.087	473,566	€4,240
Aug	16.1	0.60	0.837	0.087	434,261	€4,015
Sep	15.5	0.60	0.806	0.087	424,652	€3,794
Oct	19.5	0.60	1.009	0.075	561,714	€6,091
Nov	23.5	0.60	1.211	0.075	566,884	€7,288
Dec	26.4	0.60	1.357	0.073	600,462	€8,582
Jan '04	26.0	0.60	1.338	0.073	586,561	€8,275
Feb	26.0	0.60	1.338	0.073	554,748	€7,826
Mar	26.0	0.60	1.338	0.073	518,866	€7,320

**Totals** **6,377,973** **€72,599**

12 month commodity price (excluding UK & Irish Transportation Charges and shrinkage). Price in Sterling pence per therm = **22.66**

12 month commodity price in Euro cent per kWh = **1.138**

1 Therm = 29.3071 kwh Exchange based on 0.6794

### 2) Monthly price per kWh including Transportation Commodity charges, excluding

Transportation Capacity charges						
	12 month price cent/kWh	UK Transport cent/kWh	Transmission Commodity cent/kWh	Distribution Commodity cent/kWh	Shrinkage cent/kWh	Monthly cost per kWh excluding Capacity
Apr'03	1.138	0.027	0.037	0.135	0.025	1.362
May	1.138	0.027	0.037	0.135	0.024	1.361
Jun	1.138	0.027	0.037	0.135	0.024	1.361
Jul	1.138	0.027	0.037	0.135	0.024	1.361
Aug	1.138	0.027	0.037	0.135	0.024	1.361
Sep	1.138	0.027	0.037	0.135	0.024	1.361
Oct	1.138	0.027	0.037	0.135	0.028	1.365
Nov	1.138	0.027	0.037	0.135	0.030	1.367
Dec	1.138	0.027	0.037	0.135	0.032	1.369
Jan '04	1.138	0.027	0.037	0.135	0.034	1.371
Feb	1.138	0.027	0.037	0.135	0.033	1.370
Mar	1.138	0.027	0.037	0.135	0.032	1.369

### 3) Total Monthly delivered charges including fixed capacity charges

	Monthly Volume kWh	Unit rate c/kwh	Cost excluding Capacity	Transmission Capacity	Distribution Capacity	Total Monthly Costs
Apr'03	574,152	1.362	€7,820	€1,353	€1,814	€10,988
May	559,294	1.361	€7,612	€1,353	€1,814	€10,779
Jun	522,813	1.361	€7,115	€1,353	€1,814	€10,283
Jul	473,566	1.361	€6,443	€1,353	€1,814	€9,611
Aug	434,261	1.361	€5,908	€1,353	€1,814	€9,076
Sep	424,652	1.361	€5,778	€1,353	€1,814	€8,945
Oct	561,714	1.365	€7,667	€1,353	€1,814	€10,834
Nov	566,884	1.367	€7,748	€1,353	€1,814	€10,916
Dec	600,462	1.369	€8,220	€1,353	€1,814	€11,388
Jan '04	586,561	1.371	€8,040	€1,353	€1,814	€11,208
Feb	554,748	1.370	€7,599	€1,353	€1,814	€10,766
Mar	518,866	1.369	€7,102	€1,353	€1,814	€10,270

**Totals** **6,377,973** **€87,054** **€16,238** **€21,770** **€125,062**

Average unit delivered price in cent per kWh = **1.961**

**Annual D&C 2 +15% Ceiling Value at 1st April 2003**

Passthrough Charges	€52,463
Commodity Charges	€82,984
Total Charge	<b>€135,447</b>
Cost per kWh	2.124

**RTF 12 Month Fixed Price Contract Value at 1st April 2003**

Passthrough Charges	€52,463
Commodity Charges	€72,599
Total Charge	<b>€125,062</b>
Cost per kWh	1.961

**This Customer is not eligible for a price Cap because the annual RTF price is less than D&C2+15% at 1st April 2003.**

## Worked Example 3

### Calculation of Price Cap for Customer with a contract expiry after 1st April

**Scenario :** Commodity Market Prices have increased above April'03 market prices by 10% when the 12 month RTF price is calculated at the expiry of customers existing contract.

**Annual Volume :** 5941 Mwh

#### Cost Allocation of D&C2+15% at 1st April 2003

Passthrough Charges	€69,056
Commodity Charges	€57,472
Total Charge	<b>€126,528</b>
Cost per kWh	2.130

#### RTF 12 Month Fixed Price Contract Value

	RTF at 1st April	Scenario after 1st April	Change
Passthrough Charges	€69,056	€69,056	€0
Commodity Charges	€71,856	€79,042	€7,186
Total Charge	<b>€140,912</b>	<b>€148,098</b>	<b>€7,186</b>
Cost per kWh	2.372	2.493	0.121

This Customer would be eligible for a price Cap because the annual average RTF price at 1st April inclusive of commodity and passthrough charges at 2.372 c/kwh is greater than the annual average D&C2+15% price at 2.13 c/kwh.

In this scenario the 12 month RTF commodity price has risen above the April'03 RTF market price. Therefore the full original discount calculated at April'03 prices is available.

D&C2+15% Commodity Value =	€57,472
RTF 12 month fixed commodity value =	€71,856
Difference	-€14,384
Discount on commodity price until Mar'04=	<b>-0.242 c/kwh</b>

The cap discount is available until the end of March 2004 provided that the customer remains on the RTF fixed price contract.

In this customers case the monthly commodity charge is calculated as

12 Month RTF contract price =	1.2095 c/kwh
less D&C2+15% Discount until Mar'04	-0.2421 c/kwh
Effective Commodity Price until Mar'04 =	<b>0.967 c/kwh</b>

## Worked Example 4

### Calculation of Price Cap for Customer with a contract expiry after 1st April

#### Scenario :

Commodity Market Prices have decreased below April'03 market prices by 10% when the 12 month RTF price is calculated at the expiry of customers existing contract.

Annual Volume : 5941 Mwh

#### Cost Allocation of D&C2+15% at 1st April 2003

Passthrough Charges	€69,056
Commodity Charges	€57,472
Total Charge	<b>€126,528</b>
Cost per kWh	2.130

#### RTF 12 Month Fixed Price Contract Value

	RTF at 1st April	Scenario after 1st April	Change
Passthrough Charges	€69,056	€69,056	€0
Commodity Charges	€71,856	€64,671	-€7,186
Total Charge	<b>€140,912</b>	<b>€133,727</b>	<b>-€7,186</b>
Cost per kWh	2.372	2.251	-0.121

This Customer would be eligible for a price Cap because the annual average RTF price at 1st April inclusive of commodity and passthrough charges at 2.372 c/kwh is greater than the annual average D&C2+15% price at 2.13 c/kwh.

In this scenario the 12 month RTF commodity value has fallen below the April'03 RTF market price , therefore the discount is calculated as

D&C2+15% Commodity Value =	€57,472
RTF 12 month fixed commodity value =	€64,671
Difference	-€7,198
Discount on commodity price until Mar'04=	<b>-0.121 c/kwh</b>

The cap discount is available until the end of March 2004 provided that the customer remains on the RTF fixed price contract.

In this customers case the monthly commodity charge is calculated as

12 Month RTF contract price =	1.089 c/kwh
less D&C2+15% Discount until Mar'04	-0.121 c/kwh
Effective Commodity Price until Mar'04 =	<b>0.967 c/kwh</b>