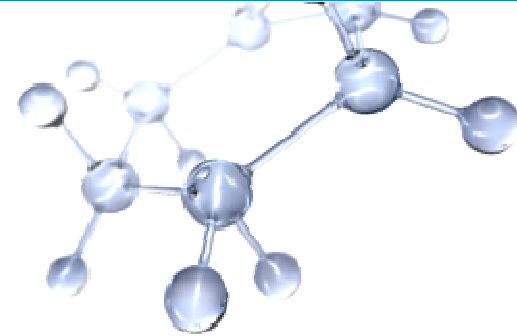


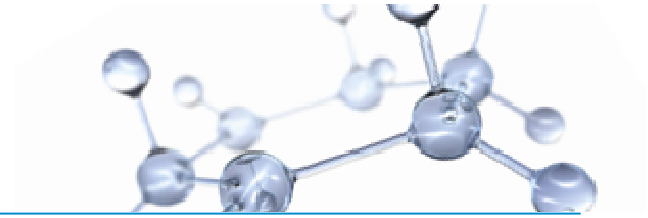
European TSO Benchmarking

Information for ECRG



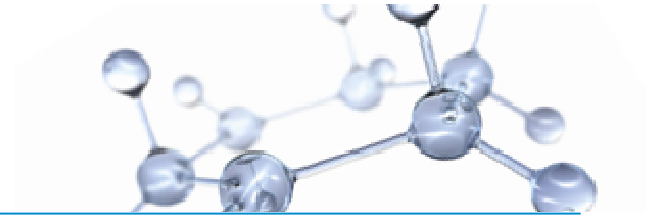
January 26, 2010

Background



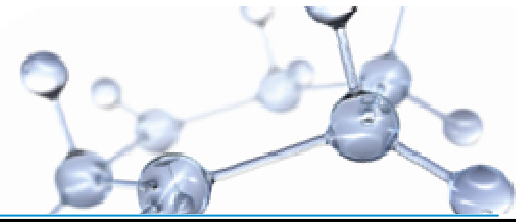
- Ongoing discussion in ECRG regarding:
 - Daily and Monthly Pricing Multipliers relative to Annual Pricing
 - Interruptible Capacity Pricing Discount and Quantity
- Appropriate to benchmark against other European TSO's
- Analysis looks at approach in Netherlands (GTS), France (GRT Gaz) and Germany (GUD)

Price Multipliers Summary



- Tariff differentiation is present in several European gas transmission systems. The following differentiation is further discussed for GTS in Netherlands, GUD in Germany and GRT Gaz in France:
 - Booking period differentiation (LT vs. ST)
 - Seasonal variation
- All 3 systems include Booking period tariff differentiation. Two of the systems include seasonal differentiation.
- Tariffs are lower for long term booking than for short term booking
 - Incentives for long term capacity bookings gives predictability on capacity utilisation and tariff income for the TSO
- Tariffs are highest during the winter months
 - Incentives for seasonal variations reduces summer/winter swing and increases overall capacity utilisation of the transmission network and revenue certainty

Price Multiplier Details



- **GTS Netherlands**

- Monthly factors with differentiation between winter, summer and shoulder months
 - Monthly unit costs for summer months are cheaper than unit costs assuming annual capacity
- Sum of the monthly factors can never exceed 1
- The tariff for daily contracts is 1/15 times the monthly factor multiplied by the annual tariff

- **GUD Germany**

- Monthly factors with five tariff levels
- Daily tariff is 15% of the applicable monthly tariff
- Discount given on half yearly and quarterly capacity compared to monthly
- Following cap exists
 - Capacity order less than 1 year shall not exceed annual capacity charge
 - Capacity order less than 1 month shall not exceed monthly capacity charge

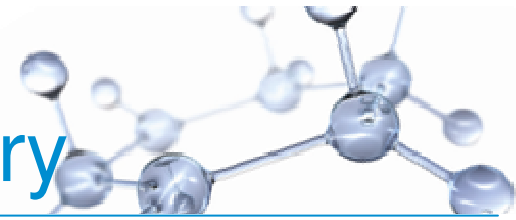
- **GRT Gaz France**

- No seasonal variation
- Monthly term is 1/8 of corresponding annual term
- Daily term is 1/20 of corresponding monthly term

| Monthly factors | UK | GTS | GUD | GRT Gaz |
|-----------------|-------|-------|------|---------|
| January | 0.085 | 0.30 | 0.35 | 0.125 |
| February | 0.077 | 0.30 | 0.35 | 0.125 |
| March | 0.085 | 0.15 | 0.30 | 0.125 |
| April | 0.082 | 0.15 | 0.15 | 0.125 |
| May | 0.085 | 0.075 | 0.10 | 0.125 |
| June | 0.082 | 0.075 | 0.10 | 0.125 |
| July | 0.085 | 0.075 | 0.10 | 0.125 |
| August | 0.085 | 0.075 | 0.10 | 0.125 |
| September | 0.082 | 0.075 | 0.10 | 0.125 |
| October | 0.085 | 0.15 | 0.20 | 0.125 |
| November | 0.082 | 0.15 | 0.20 | 0.125 |
| December | 0.085 | 0.30 | 0.30 | 0.125 |

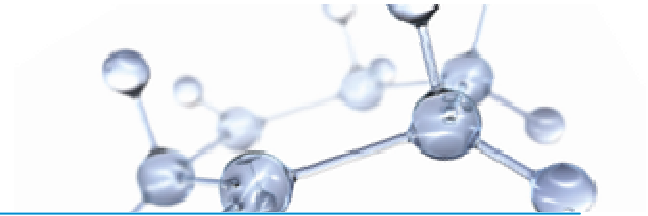
| Daily factors | UK | GTS | GUD | GRT Gaz |
|---------------|--------|-------|-------|---------|
| January | 0.0027 | 0.020 | 0.053 | 0.006 |
| February | 0.0027 | 0.020 | 0.053 | 0.006 |
| March | 0.0027 | 0.010 | 0.045 | 0.006 |
| April | 0.0027 | 0.010 | 0.023 | 0.006 |
| May | 0.0027 | 0.005 | 0.015 | 0.006 |
| June | 0.0027 | 0.005 | 0.015 | 0.006 |
| July | 0.0027 | 0.005 | 0.015 | 0.006 |
| August | 0.0027 | 0.005 | 0.015 | 0.006 |
| September | 0.0027 | 0.005 | 0.015 | 0.006 |
| October | 0.0027 | 0.010 | 0.030 | 0.006 |
| November | 0.0027 | 0.010 | 0.030 | 0.006 |
| December | 0.0027 | 0.020 | 0.045 | 0.006 |

Interruptible Capacity Summary



| TSO | Interruptible Capacity Discount to Firm | Interruptible Quantity |
|------------|--|--|
| GTS | Two Tranches – 15%-25% discount dependent on probability of interruption | Interruptible Quantity not offered until Firm sold out; limited on probability of interruption |
| GRT Gaz | Two products 50%-70% (Interruptible and UIOLI) | Interruptible Quantity not offered until Firm sold out; limited by technical capacity |
| GUD | Three Classes (A-C) 10%-40% dependent on total technical capacity sold | Class A Capacity can be purchased even if Firm available |

Considerations for ECRG



- Price multipliers common across Europe – potentially appropriate measure to further reduce TO Commodity Charges in UK
- UIOLI effective mechanism to prevent capacity hoarding
- Ability to purchase interruptible capacity at a discount before firm has sold out will reduce impact of removing discounts on firm products
- Desirable to adjust regime to ensure that desired impact of increasing capacity revenue is achieved
- Potentially solved by removing/reducing price discounts and restricting availability of interruptible capacity to take into account unsold firm