



Draft Proposal: Rebates for Entry Points with Negative LRMCs

For Discussion & Development Purposes Only

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Background

- Transportation Model introduced April 2007.
- Long Run Marginal Costs (LRMCs) – “represent the capital investment cost in additional pipe and / or compression which would be incurred (**or saved**) by an incremental change in supply or demand respectively at that point”. (Quote: WW GSOG report)
- Constraint in the model ensures that both entry and exit charges must be **greater than zero**.
- Gas Storage Operators Group report by Waters Wye concluded that certain entry points *“do provide a benefit to the transmission system because on peak days they deliver to the system close to consumer demand, thereby reducing the need for pipe and compression capacity between alternative sources of gas and the demand.”*

Rationale for constraint?

- “Payments based on capacity holdings ensure that the party bears a cost reflective proportion of the maximum cost they could impose on the system”
- “For parties who could cause a reverse flow, however, payments based on capacity alone reflect the maximum possible benefit they could provide to the system but **there is nothing to ensure that this benefit is realised...**”
- “**...It is the flow that provides the benefit** and no amount of capacity held by a user will provide a benefit if it is not utilised.”

(Source: NGG NTS, The Statement of the Gas Transmission Transportation Charging Methodology Effective from 1 October 2007)

The Proposal

- The purpose is to reward locationally beneficial entry points on the NTS where a genuine, measurable benefit is being provided by incremental flows.
- ‘Capacity’ rebates (through negative generator TNUoS charges) are already available in electricity.
- For entry points which have a negative LRMC in the Transportation model, it is proposed that an *ex-post* rebate is paid to capacity holders; provided they have **demonstrated** at that specific entry point that they were flowing gas on peak demand days.

 **So...the User would only see a benefit when flowing gas when and where it is genuinely needed at a negative LRMC entry point.**

A Suggested Calculation

- The formula proposed is similar to that shown on p.24 of the NGG NTS charging methodology to calculate entry capacity reserve prices.
- Turning the formula round, as we only want to capture negative LRMCs here and adjusting it so that it produces an annual number in '£', rather than a daily rate:

$$\text{Entry Capacity Rebate (£)} = \text{Max} [0, -\text{NMkm}_{0, Si} \times \text{AnF} \times \text{EC} \times 39 / \text{CVSi} / 10^6] \times \text{Qualifying Capacity (kWh/d)}$$

NMkmSi = Nodal marginal distance for supply (km)

AnF = Licence annuitisation factor (-)

EC = Expansion constant (£/GWhkm)

10⁶ = Conversion factor from GWh to kWh

39 = Standard calorific value (MJ/m³)

CVSi = Calorific value for supply i

Defining “Qualifying Capacity”

- How do you define what we have termed “Qualifying Capacity”? Some suggested approaches might be, for example:

- Highest entry flow over the whole year?
 - Entry flow on the highest demand day?
 - Average of the entry flow on [X] highest demand days? (e.g. TRIAD?)
 - The average of the entry flow on all days is greater than 90% of the 1 in 20 winter demand (and if there are no such days then the highest entry flow over the whole year)?
- Any other suggestions?

Next Steps...

- Feedback & development suggestions welcome.
- Particularly interested in further views on how we could define “Qualifying Capacity”.
- NGG NTS charging methodology change would be required.
- Implementation date October 2008?