Gas Transmission Charging Methodologies Forum

Draft Meeting Report: 23 February 2006

This report outlines the key discussions of the third Gas TCMF meeting held at Elexon Offices, 350 Euston Road, London on 23rd February 2006. All supporting material can be found at www.nationalgrid.com/uk/gas

ATTENDEES

Tim Davis (Chair)	TD	Joint Office of Gas Transporters
Amrik Bal	AB	Shell Energy Europe
Adam Cooper	AC	Merrill Lynch
Andy Scott	AS	Gaz de France ESS
Colin Dickens	CDi	ExxonMobil
Chandima Dutton	CDu	National Grid NTS
Christiane Sykes	CS	E.ON UK
Dennis Timmins	DT	RWE npower
Eddie Blackburn	EB	National Grid NTS
Erik Sleutjes	ES	Ofgem
Gareth Evans	GE	Total
John Bradley	JB	Joint Office of Gas Transporters
Jeff Chandler	JCh	Scottish and Southern Energy
Julie Cox	JCo	Association of Electricity Producers
Mick Curtis	MC	$e=mc^2$
Mike Young	MY	British Gas Trading
Nick Wye	NW	Waters Wye Associates
Paul Roberts	PR	National Grid NTS
Robert Buckley	RB	Cornwall Energy Associates
Roddy Monroe	RM	Centrica Storage Ltd
Steve Gordon	SG	Scottish Power
Steve Roser	SRoser	Portland Gas Limited
Steve Rose	SRose	RWE npower
Savita Shaunak	SS	EDF Energy

1. Report of Previous Meeting

The meeting report was agreed as accurate.

2. Actions and Issues from previous meeting

Actions

1. *Terms of Reference to include impact of Embedded System Entry Points (ESEPs) on the NTS and how reserve prices and LRICs should be determined for new ESEPs.*

   The Terms of Reference have been updated accordingly **Action Closed**

2. *Consider potential for generating LRMCs and LRICs simultaneously (i.e. using same base network).*

This has been included on the issues log. **Action Closed**

3. *Scale of price variations between neighbouring offtakes to be considered and explained.*

   This has been included on the issues log. **Action Closed**

4. *National Grid NTS to prepare illustrative example of how solver generates the entry exit costs from the LRMC matrix.*

   National Grid had prepared a presentation for this forum. **Action Closed**

5. *National Grid NTS to prepare and circulate a list of relevant pricing consultations and Network Code modifications.*

   National Grid NTS advised that pricing consultations can be viewed on the National Grid website. A summary of the consultations on SO Commodity Charge was issued at this meeting of the forum. **Action Closed**

Issues

The following were agreed as issues for discussion within this and future forums:

1. Consider impact of DN embedded entry points (ESEPs) on NTS and how reserve prices and LRICs should be determined for new ESEPs.

2. Consider potential for generating LRMCs and LRICs simultaneously (i.e. using same base network).

3. Scale of price variations between neighbouring offtakes to be considered.

4. Level of reserve price discounts for daily capacity to be reviewed.

5. Linkage between UCAs and reserve prices to be reviewed and consider option of setting reserve prices to zero.

6. Consider whether different weightings for entry-exit pairs within solver should be introduced to take account of actual flows.

3. Objectives of the Meeting and Workplan

PR presented this item (this and all other material presented is available from National grid at http://www.nationalgrid.com/uk/Gas/Charges/TCMF/. He reminded the meeting of the work programmes previously circulated which identified this meeting for consideration of potential enhancements. At the end of March Ofgem would be issuing its third Transmission Price Control Review (TPCR) consultation. PR suggested that discussion of the Enduring Exit Options and Entry Options should take place prior to the issue of Ofgem's initial TPCR proposals. This was agreed in principle.

4. LRMC Methodology Enhancement Options

EB gave this presentation. The current entry and exit methodologies were based upon ten years of supply and demand forecast data. This data was used to generate the LRMC matrix. The solver was then run. The solver is constrained so that negative prices will not be generated. For the exit methodology, the results are then scaled to achieve a target 50:50 entry:exit split. Finally, for exit only, this is scaled to reflect allowed revenue after apply all price change caps.

In answer to a question from DT, EB explained that there were ten discrete steps to generate the model, with the base network from the previous year rolled forward to the subsequent year. It was acknowledged that this could lead to a different answer than if the year ten base network was derived directly from the year 1 base network.

EB posed ten questions for discussion.

1. Supply and Demand Scenarios: 1 Year or Multiple Year?

   One forum member suggested the forum consider five years rather than ten years as this was consistent with price control periods. SRoser pointed out that lock-ins on entry were up to sixteen years, so a matching number of years might be appropriate.

   AC asked whether National Grid had quantified the outcome of changing the approach. EB responded that it would be possible to model single year methodology for previous years so that the impact might be studied. TD, however, suggested that a view might usefully be taken on the principle prior to evaluating impacts. EB stated that there was more certainty with single year costs and it was debatable that taking more years improved cost reflectivity. On the other hand, the experience of Milford Haven, which is expected to radically affect system flows, might justify using more than one year's information.

   NW pointed out that some of the scaling and capping processes affected cost reflectivity. He wondered how changing the assumptions would affect this and would need to see the full impact before reaching any conclusions. EB stated that there might be up to 240 scenarios modelled if all combinations were taken, which would be impractical. NW suggested it would be helpful if National grid could identify which were the key assumptions which drive variance on the outcome.

   AC mentioned the risk of instability if a single year model were used. MY believed this was also incompatible with User Commitments extending into several years. Users wanted long-term stability of prices if they were to make long-term commitments. He distinguished between a User commitment at a fixed price and User commitment at the prevailing price. SRoser believed there had to be some smoothing, particular for some market participants. JC suggested reflecting uncertainty by running several scenarios and averaging them. This might give more stability.

   SRose pointed out that the scenarios are essentially eliminated with the Single Year model based on actual rather than forecast data. This was acknowledged by the forum.

2. How should incremental costs be modelled?

   EB outlined three variants. Transcost, Transcost + Expansion Factor, and Transportation Model + Expansion Factor. MC wondered whether modelling incremental costs year after year rather than considering a single investment might lead to an inefficient network. EB responded that the Transcost methodology allows only limited economies of scale and so avoided this pitfall.

3. How should spare capacity be treated?

   EB suggested that if spare capacity were removed from the modelling, this could be done within Transcost by scaling flows, removing assets or by capping pressures. The Transcost + Expansion Factor, and Transportation Model + Expansion Factor models would not take into account spare capacity due to the process of applying the expansion constant to incremental flows.

4. Should decrement (back flow) costs be considered?

EB identified three costing options for back flow. Zero costing, decrement costing (i.e. the negative of the prevailing flow reinforcement cost or scaling-down the size of the network to match reduced flows (e.g. remove duplicate pipes or scale down pipeline diameters).

Introducing discussion of Questions 2, 3 and 4 above, TD asked whether the forum was clear on the difference between the three options. He suggested that Model 2 might not be substantially different in terms of results when compared with Model 1. PR suggested that Model 3 could be summarised on a spreadsheet and this could potentially be issued to the industry. SRoser said there was an advantage to customers in being able to do this. TD believed that Transcost had been audited, but was complex and therefore appeared to the industry to be a black box. NW suggested that a model that did not signal the scale and location of unused capacity was undesirable and this would be a disadvantage for Model 3. EB responded that all the models simulated marginal costs but Model 3 would not simulate integral costs. In the absence of more detailed analysis, he was unsure whether expansion factor models could be regarded as sufficiently cost reflective.

PR asked what value the industry placed on simplicity. NW suggested that Model 3 had benefits and questioned whether Model 1 was as cost reflective as it claimed to be.

MC asked how another Milford Haven could be accommodated. EC stated that the whole base network would have to be changed and the model reissued. PR stated that, currently, Transcost can only accommodate a certain level of change – Graphical Falcon had to be used for major changes in the network.

On backflow, EB stated that this wouldn't necessarily lead to negative costs. It could be a reduction in costs. AC suggested that moving to a more transparent model might raise the profile of a decision on moving to negative tariffs. It was agreed that the electricity transmission model used a simpler model and did allow some negative tariffs but in some cases these tariffs were capped at zero.

5. How should entry and exit costs be disaggregated?

   EB stated that the NBP was a notional point, but it could be made into a reference node for the purpose of a simplified model. NW asked whether the reference node might produce negative tariffs. EB stated that this was dependent on the model used - a reference node could lead to a very different answer from the solver if backhaul were not included but could lead to exactly the same answer if backhaul were included. The solver attempted to minimise the differences between entry/exit costs and actual route costs. TD suggested this was a good principle but might lead to instability. AC did not believe that adoption of a reference node would lead to increased simplicity.

6. How should negative costs be treated?

   EB stated that back-flows had been described as flows that were beneficial to the network. This, however, could only be realised if there was a guarantee that the gas would flow in the reverse direction. TD asked if there would always be assurance of flow at the modelled 1 in 20 peak. EB responded that peaks are not always coincident so that assumption may not be valid. Constrained LNG was an example of a beneficial flow but the credit available reflected an obligation to flow when requested. EB stated that commoditisation may be essential with negative tariffs. Other members of the forum accepted that commodity as opposed to capacity based negative charges could help to avoid perverse incentives.

7. Should capacity charges be adjusted to 50:50 entry:exit and if so how?

   Three choices existed if 50:50 were to be retained. These were scaling, adjustment or through the solver constraints. The latter two approaches might be the more cost reflective. The forum did not reach a consensus on any of these choices. MY suggested that, in this case, taking a pragmatic approach would have benefits in respect of stability. TD suggested that the modelled split between entry and exit was a key potential cause of instability in the model outcomes.

8. Are zones required?

   The forum suggested that it was desirable to await further progress on other aspects of exit reform prior to debating this further.

9. Should capacity charges be adjusted to recover allowed revenue and if so how?

   NW asked whether recovering TO allowed revenue via a commodity charge would lead to variation in the capacity/commodity split from year to year. EB confirmed that this might be the effect. There was also a possibility that scaling might enhance the magnitude of negative tariffs and hence using a constant adjustment factor might lead to the greatest stability.

10. Should year on year price changes be capped?

    EB stated that if the approach adopted yielded a cost reflective result, the argument for capping was reduced. JC and MY believed that capping only deferred the inevitable and might lead to inconsistencies for new entrants. EB suggested that identifying costs in the future might reduce the justification for capping – if those forecasts proved to be substantially correct

    TD identified an apparent inconsistency in the discussion in that the forum had expressed the desire to have long-term stability but was unsympathetic to caps. EB suggested that some instability was inevitable in an entry/exit regime.

5. Way Forward

PR suggested holding two working groups to run through the Transport and Tariff Model issues in more detail. These groups would report back to the forum. This was agreed

6. Solver Example

EB went through a simplified example with three entry points and four exit points to demonstrate how the Solver was used within the prevailing LRMC methodology. It was agreed that the example network could be used at further meetings to investigate the impact of other Transport & Tariff model changes such as back-haul.

JC questioned how realistic some of the peak day flows were that are used to generate charges particularly the longer flow routes. EB stated that for each route the costs would be split between Entry and Exit. There was some debate as to how long gas took to flow through the system and some forum members thought this was up to two days. EB stated that the average time that gas resided in the system was approximately a day.

7. AOB

None

8. Dates of Next Meetings

The next meetings were set for:

2 March (pm) Working Group to assess Transport Model options

9 March (pm) Working Group to assess Tariff Model options

22 March (pm) Gas TCMF

26 April (full day) Gas TCMF

Action Log

No.	Date Raised	Description	Status	Comments
1	24/01/06	TOR to include impact of Embedded System Entry Points (ESEPs) on the NTS and how reserve prices and LRICs should be determined for new ESEPs.	Closed	TORs updated. Also included on issues log.
2	24/01/06	Consider potential for generating LRMCs and LRICs simultaneously (i.e. using same base network)	Closed	Included on issues log
3	24/01/06	Scale of price variations between neighbouring offtakes to be considered & explained	Closed	Included on issues log
4	24/01/06	National Grid NTS to prepare illustrative example of how solver generates the entry exit costs from the LRMC matrix	Closed	Example discussed at 23rd Feb Gas TCMF
5	24/01/06	National Grid NTS to prepare and circulate a list of relevant pricing consultations and Network Code modifications.	Closed	Previous pricing consultations can be viewed on the National Grid website. Summary of SO commodity consultations issued at 23rd Feb Gas TCMF