February 2000

TRANSCO PRICING CONSULTATION PAPER PC52

TRANSPORTATION CREDITS FOR CONSTRAINED LNG

SUMMARY

The Constrained LNG facilities, Avonmouth, Dynevor Arms and Isle of Grain, provide a substitute for pipeline capacity (and security back-up) to the southern and south-western extremities of the NTS. Shippers booking these LNG services are obliged to maintain minimum inventories and allow Transco to nominate gas out of storage on their behalf at times of high local demand.

Since the start of the Network Code, shippers booking LNG services at the Constrained LNG facilities have received a transportation credit in respect of their LNG deliverability bookings.

The existing credits do not fully reflect the level of cost avoided by the provision of constrained LNG. This paper proposes that the level of credit should be altered so that it is related to the exit charges of the zones supported by the CLNG facility. This approach should improve the cost reflectivity of the credits. It should also improve comparability with transportation charging for interruptible supply points, so creating appropriate conditions for competition among the various effective means of providing peak capacity.

The proposed approach is supported by the Planning & Security (including Storage) Network Code Workstream and was included in Ofgem's November 1999 LNG Review proposals document. It is hoped that the introduction of this new methodology will facilitate a more general reform of LNG services, in particular the proposed auctioning of LNG capacity for Storage Year 2000/01.

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1. INTRODUCTION

The Constrained LNG (CLNG) facilities (Avonmouth, Dynevor Arms and Isle of Grain) provide a substitute for pipeline capacity (and security back-up) to the southern and south-western extremities of the NTS. To reflect the costs avoided by the provision of CLNG, shippers receive a transportation credit in respect of their booked storage deliverability.

The present level of credit for the three CLNG sites is based on the entry/exit Long Run Marginal Cost (LRMC) analysis performed in 1995. The level is based on the entry charges that would have applied at those CLNG facilities in 1995 using the standard entry/exit procedure but without the requirement that the entry charges at the CLNG facilities must be positive. In practice this calculation gave small, negative results. These credits have not been changed since they were first calculated.

The existing methodology does not fully reflect the present NTS transportation costs avoided by the provision of CLNG and is not consistent with charging for interruptible supply points, which similarly provide a reduction in potential peak flows compared to the situation if they were firm supply points, thereby avoiding the need to invest in pipeline capacity.

This paper proposes a revised methodology for setting the level of credit for CLNG facilities. The proposal is in line with the views of the Planning & Security (including Storage) Network Code Workstream, and Ofgem's November 1999 LNG Review proposals document. It is hoped that the introduction of this new methodology will facilitate a more general reform of LNG services, in particular the proposed auctioning of LNG capacity for Storage Year 2000/01.

2. LEVEL OF CREDIT

If CLNG did not exist, Transco would be required to build additional pipeline capacity to carry additional gas on the peak day to the relevant exit zones, sufficient to meet the 1 in 20 criterion. CLNG thus provides a substitute for pipeline capacity from various entry points to the relevant exit zone, and hence, with regard to cost-reflectivity, the level of credit should reflect the pipeline investment avoided. In this regard, CLNG provides a transportation service.

Transco's existing pricing methodology for setting exit charges and entry floor prices is based on the level of investment and operating costs for incremental flows along NTS entry-exit routes i.e. a LRMC (Long Run Marginal Cost) methodology. It seems reasonable and appropriate, therefore, to base the level of CLNG credits on the entry/exit charges determined from the LRMC methodology so as to reflect the avoided costs of pipeline investment by having CLNG and to provide consistency with the charging structure for services providing a similar benefit, such as interruptible supply points.

Since entry prices are now set through auctions rather than reflecting Transco's costs, it is arguable whether the level of credit for CLNG should reflect both exit charge levels and entry charge levels as determined by the LRMC methodology. However, Transco proposes that the level of credit should be related only to the exit charges of the exit zones supported by the

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CLNG facility since these provide a clear geographical link to the costs avoided. This approach is consistent with the structure of charges for NTS interruptible supply points, which are not required to pay exit capacity charges.

The LRMC-derived exit charges are, at present, scaled so as to reflect a set level of intended revenue. It might be considered that, in the interests of cost reflectivity, the level of credit for CLNG would be best reflected by the unscaled exit charges. However, all pre-determined (non-auction) charges are set with regard to a given level of revenue recovery for all such charges and it is consistent to base the level of credit for CLNG on the applicable exit charges, which are derived from the scaled results. This approach should also improve comparability with transportation charging for interruptible supply points, so creating appropriate conditions for competition among the various effective means of providing peak capacity.

3. ELIGIBLE QUANTITY FOR CREDIT

Constrained LNG sites provide a substitute for peak-day pipeline capacity equal to their deliverability.

Transco plans NTS transportation investment to ensure the 1 in 20 peak day criterion is met. Various substitutes are available such as new pipelines, additional compression, CLNG deliverability, and interruptible supply points. The planning and decision on the means of provision of the peak day capacity must typically be made some years before the relevant peak day winter period.

At the time of determining the operational strategy for the relevant winter period, the available capacity will typically exceed the requirement by a small percentage. This is because the supply and demand balance rarely develops exactly as forecast and because the various means of providing transportation capacity are all "lumpy" to some degree i.e. it is inefficient to provide them in very small quantities.

In terms of operational strategy, where CLNG provides part of the available capacity, it is efficient to reduce the utilisation of the CLNG, rather than the existing pipeline capacity, because the pipeline has very much lower variable operating costs. Specifically, incremental use of the pipeline system may involve additional running of compressors whereas increased use of CLNG would lead to higher liquefaction costs, which would be much higher than the additional pipeline compression costs. This policy also minimises the extent to which shippers' bookings have to be constrained at the CLNG facilities.

Since CLNG typically only provides a small proportion (say 10%) of the total capacity in the relevant exit zones, if the requirement for transmission capacity is less than the potential capacity available (say 95%) then this results in a large reduction (say 50%) in the requirement for constrained LNG from what is potentially usable.

The provision of the full CLNG deliverability thus enables an equivalent amount of pipeline capacity to be avoided, even though the short-term forecast operational requirement may be for less than full CLNG deliverability. It is therefore considered reasonable to apply the credit to the full CLNG facility deliverability booked by shippers. This proposal is consistent with present practice and with interruptible supply points not being required to pay any NTS exit

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capacity charge even though their value, in terms of avoided peak capacity investment, varies from year to year.

4. PROPOSAL

Transco proposes that the credit for CLNG deliverability should be based on the exit capacity charge rates at the relevant exit zones at any time. The Isle of Grain and Dynevor CLNG facilities are located in and support exit zones SE1 and WA2 respectively. Avonmouth is located in exit zone SW2, but also supports exit zone SW3 and an NTS load; it is therefore proposed that the transportation credit be based on the forecast peak-day flow-weighted average of the exit zones which each CLNG facility supports.

On the basis of the present exit charges the credit at each CLNG facility would be:

	Present Credit	**Proposed Credit**
	Pence per registered kWh per day	
Dynevor Arms LNG	0.0009	0.0201
Isle of Grain LNG	0.0006	0.0115
Avonmouth LNG	0.0011	0.0233

5. TIMING OF IMPLEMENTATION

There is likely to be some benefit from the early implementation of revised CLNG credits in order to give a clear price signal to shippers at the time of booking LNG and other storage services, which usually occurs from 1 May each year. Implementation from 1 May 2000 would achieve these benefits. However, if the proposed approach is accepted, implementation soon after this date may be necessary to allow sufficient time for consultation, consideration of the responses to consultation, and the provision of two months notification as required by the Network Code, unless Ofgem and shippers support a shorter period for notification.

6. IMPACT OF PROPOSALS

NTS exit charges were set for October 1999 such that capacity related charges were expected to recover 65% of the target NTS revenue, namely £311m. If the credits for the CLNG deliverability had been set at the proposed levels at October 1999 then it is estimated that, on the basis of the booked deliverabilities being at the level assumed in the supply/demand forecast underlying the entry/exit price setting process, the forecast credit related to the CLNG facilities would have increased from £0.5m to £9.8m. In order for the same forecast revenue to be achieved, NTS exit charges would have had to be increased by 3% from their present levels.

If new CLNG credits based on the proposed methodology are implemented prior to October 2000, Transco would **not** propose to change the level of other NTS charges at the same time.

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However, the impact of any agreed change to the pricing methodolgy related to CLNG credits could be reflected when transportation charges are next amended.

QUESTIONS FOR CONSULTATION

Views are sought on:

The proposed methodology, as set out in section 4, for determining credits for CLNG deliverability;

If the new methodology is agreed, whether the implementation of revised credits should be

a) on 1st May 2000, possibly with a shorter notification period than normal; or

b) at a later date.

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