TRANSCO NETWORK CODE MODIFICATION PROPOSAL No. 0512

"Introduction of a Within Day Entry Profiling Charge"
Version 3.0

Date: 13/12/2001

Proposed Implementation Date: 01/10/2002

Urgency: Non-Urgent

Justification

Transco has observed an increase in within day NTS linepack movements since the introduction of RGTA. Such variations have arisen from an increased divergence between the rate at which gas is input to and offtaken from the NTS. Excessive differences between these rates may generate linepack depletion that could, in the absence of actions by Transco, jeopardise the safe and secure operation of the system.

In the interests of efficient capital investment, and reflecting its expected use as a bulk transmission pipeline ,the design of the NTS has always assumed that input flows will approximate to an hourly level of 1/24th of the demand for the day. The NTShas therefore been designed with sufficient linepack margin to cover only forecast demand changes and associated minor delays in "matching" input flow changes, limited supply failures, prudent provision for pipeline and plant failure, and some diurnal storage provisions to the LDZs as a result of investment optimisation by Transco. Network Code provisions encourage Users to balance their gas accounts and initially included a "matching renominations" principle. This, together with the obligation within the Network Code to ensure deliveries into the system are in accordance with the "uniform flow rate principle", sought to ensure that input flows were broadly consistent with network design principles.

The observed increase in NTS linepack variations may have been caused by behavioural changes that have been legitimised under the NGTA by the greater commercial freedom granted to Users to change their imbalance position within day. Users are able to enter the Gas Day with a significant end of day nominated imbalance. They can subsequently change their imbalance position within day provided that gas flows onto the system are in accordance with the uniform flow rate principle. This can generate significant mismatches between inputs and offtakes from the NTS. Thus even though Users may be complying with both Network Code and Shipper Licence conditions, input and offtake rates may differ significantly and therefore much larger linepack variations than previously observed can be experienced on the NTS. A User is then able to renominate, and adjust either trade positions or gas flows to reduce its end of day imbalance later in the day, thereby avoiding exposure to cash-out prices, but with uncertain effects on the within day linepack profile. Thus the effect should be regarded as legitimate, but a consequence of the underlying regime design.

Transco is concerned that if the current trend towards increased profiling at entry points continues, this may necessitate an increase in system balancing actions to prevent within day linepack exceeding safe operational limits. Such actions might generate additional costs that, under the current regime, would be smeared to all Users and would not necessarily be targeted at those Users generating such costs.

It is therefore appropriate to consider developments to ensure that commercial arrangements promote behaviours consistent with underlying system design concepts. It is thus proposed that the introduction of a scheme should be considered that would target costs arising as a result of within day profiling at entry to the NTS to the Users that have generated such costs. Such a scheme might encourage Users to flow gas at a uniform rate and should reduce the level of uncertainty of physical flows. This should consequently generate greater efficiency in Transco's balancing action decision making process.

Nature of Proposal

It is proposed to better target costs incurred in undertaking balancing actions to manage within day NTS linepack variations to those Users that flow at the input points to the NTS that may be generating such costs. The proposed scheme would also generate increased commercial incentives for Users to input flows into the NTS at a constant hourly rate across the gas day.

It is proposed that a set of rules be developed that 'tags' Transco balancing actions either as 'system' or 'energy' balancing actions. System balancing actions are proposed to be those deemed to be incurred in ensuring the NTS remains in operational balance during the gas day (i.e. actions to address within day temporal and/or locational problems). Energy balancing actions are proposed to be those actions deemed to be incurred to ensure the necessary supply/demand balance over the aggregate of the 24 hours that presently comprise the gas day. A similar set of rules applies under NETA.

Under the proposal, if no costs were incurred as a result of Transco balancing actions in response to within day linepack variations, the charge would be zero. The proposal does not, therefore, impose additional cost attribution unless such costs are incurred. This makes the proposed system balancing charge dynamic and related to the costs incurred in taking balancing actions to address within day linepack variations on the system.

Three broad steps are proposed that might be required to implement such an approach:

i) Identifying the volumes of gas that will face the system balancing costs;

Volumes would be determined for each sub-terminal by:

- taking aggregate hourly profiles of the actual gas flowed though each sub-terminal on the day;

- deriving the absolute difference between each sub-terminal's flows throughout the day for each hour and that sub-terminal's average flow (1/24th rate). This will determine the volume of each sub-terminal's gas flows that will attract the charge;

- taking the end of day allocations for each User at each sub-terminal to derive each User's proportion of the sub-terminal flow for that day; and

- multiplying the User's proportion of the sub-terminal flow for the day by the sub-terminal volume of profiled flows, to determine the User's profiled volumes for that sub terminal for the day.

Each individual User volume contribution to the entry profile will be derived by summing Users' profiled volumes over all sub-terminals that have a net input flow.

ii) Calculating system balancing costs

System balancing costs would be deemed by summing:-

- the direct costs of any Transco system balancing actions (price multiplied by quantity in the case of an OCM action or the costs associated with using Operating Margins); and

- any indirect costs such as movements in average on the day prices as a result of system balancing actions.

iii) The charge for each User

This will be calculated by deriving a unit cost for the "profiled volumes" (total system balancing costs divided by aggregate system entry profiled volumes) and multiplying each User's aggregate profiled volumes by the unit cost.

It is envisaged that the cashflows arising from these charges would feed into the Balancing Neutrality arrangements.

Purpose of Proposal

The purpose of this proposal is to provide greater commercial incentives on Users to flow gas into the NTS at a constant rate across the gas day. This should result in greater certainty over physical flows, and in turn should generate greater efficiency in Transco's balancing action decisions, furthering its relevant objective of efficient and economic operation.

It is intended that the scheme will also better target costs generated in the regime and will thus better facilitate the relevant objective of securing effective competition between relevant Users.

Consequence of not making this change

If the proposed change is not implemented, Users will continue to have limited incentives to adhere to the uniform flow rate principle embodied in the Network Code. The continuation of the current level of linepack profiling can result in inefficient system balancing actions and costs that are not fully targeted to the Users that generate those costs. Any further deterioration of the extent of within day profiling may ultimately jeopardise network security.

Area of Network Code Concerned

Section C: Nominations;
Section F: System Clearing, Balancing Charges and Neutrality.

Proposer's Representative

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