

***“Guidelines for tariff structure pertaining to intrastate and cross border transport and transit<sup>1</sup>.”***



*Position Paper of the CEER for the Madrid V Regulatory Forum, Madrid, 7/8 February 2002*

***Introduction:***

- 1) The conclusions of Madrid IV Forum requested the CEER to prepare for discussion at the Joint Working Group guidelines on the above title. The Forum also requested the CEER to prepare guidelines for the convergence of balancing regimes.
- 2) A previous version of this paper was presented to the Joint Working Group on December 17. Representatives were invited to submit comments by 15 January. None were received. A previous version of this paper has also been discussed with GTE on two occasions.
- 3) This paper is structured in two parts. Part I, contains high level principles in respect of tariffs and balancing regimes. Part II of the paper presents an elaboration of the high level principles and a discussion of 'entry-exit' tariffs vis-à-vis 'point-to-point' and 'postage stamp'.
- 4) The discussions with GTE on the relative merits of different tariff systems are at an early stage, with only one substantial discussion so far on tariffs. It is clear, however, that some parties to the Madrid process remain unconvinced of the merits of 'entry-exit' tariffs from a transporter's perspective. The CEER Gas Working Group would welcome further discussions on this issue so as to better understand the justification in terms of the predominant direction of flow and/or network configuration of other systems.
- 5) There is one final point in respect of the title that is worth noting before proceeding further. As such, there are no cross-border tariffs in gas – that is tariffs to cross TSO boundaries. It is simply the case that users pay a sequence of TSO charges for the systems they use *en route*. For this reason, the high-level principles refer to tariffs in general and make no distinction between 'intra-state' and 'inter-state'.

***Part I: High-Level Principles:***

The CEER invites the Forum to adopt the following high-level principles. These principles should be set by National Regulatory Authorities as ex-ante methodologies or structures for the tariffication of infrastructure services:

***In respect of tariffs or charges:***

- 6) The CEER considers that 'entry-exit' tariffs best facilitate the development of competition in the European gas market and the following objectives. All tariffs or charges for the use of gas transmission networks, should:
  - a) be cost reflective and based upon a robust modelling of flows and network topology;
  - b) facilitate *efficient* gas trade, facilitate market liquidity and gas-to-gas competition;
  - c) ensure the highest levels of transparency; and

---

<sup>1</sup> Paragraph 11 of the Madrid IV conclusions, July 2001.

- d) provide effective and timely signals for *efficient* long-term investment in transport infrastructure, especially where network constraints exist.

***In respect of balancing:***

- 7) It is the responsibility of the Network Users to balance their inputs and offtakes of gas from the network.
- 8) The rules set by a TSO obliging Network Users to balance their inputs and offtakes of gas from its network and the charges imposed on Network Users for imbalance should:
  - a) be non-discriminatory and not distort local, national or cross-border forward or spot energy markets; and
  - b) incentivise Network Users, through charges for energy imbalance, to balance their own inputs (offtakes) of gas by targeting costs wherever possible to those who are ‘out of balance’; a certain amount of imbalance may be allowed to which no imbalance charges apply provided these tolerances are non-discriminatory; and
  - c) where the TSO offers additional flexibility it must be priced as a separate service to ensure that there is no cross-subsidisation.

Furthermore:

- d) TSOs should be able to recover from the generality of Network Users those balancing costs, which cannot be targeted to Network Users who are out of balance provided that:
  - i) The costs are efficiently incurred; and
  - ii) The method of cost recovery is non-distortionary and non-discriminatory.

***Additionally:***

- 9) The CEER reiterates the principles already agreed by Madrid Forum of October, 2000, namely<sup>2</sup>:
  - a) Cost reflective charges which minimise any subsidies across categories of Network User;
  - b) Non-discriminatory access to the network and to ancillary services;
  - c) The provision of relevant timely and accurate information by TSOs (and where appropriate market participant);
  - d) The efficient use of the network;
- 10) The CEER recognises that this paper does not discuss the following important issues:
  - a) Valuing and charging for interruptible capacity;
  - b) Incentives on TSOs for efficient network operation; and
  - c) Short distance tariffs.

All of which are important to the development of competition, market liquidity and gas-to-gas competition.

- 11) The CEER proposes to undertake work on transit and capacity release and these topics in consultation with the Industry and representatives of interested Member States. The CEER requests the Forum to endorse this workplan and approach.

***Part II Elaboration***

***The CEER believes that:***

---

<sup>2</sup> An appropriate balance between the various principles needs to be reached. For instance, cost reflectivity vis à vis the desire that tariffs be as simple as possible. However, whereas unnecessary complexity might *inhibit* trade, deviation from cost reflectivity and non-discrimination will *distort* trade. Ultimately, distorted trade flows will not facilitate the development of the IGM.

- 12) Tariffs should facilitate *efficient* trade and the development of mechanisms (for example hubs) which facilitate market liquidity and gas-to-gas competition within the internal market. Specifically:
- a) Where tariffs are administered prices, the level should reflect efficiently incurred costs and derive from a robust modelling of general network flows and network configuration. The structure of tariffs should reflect the underlying cost drivers. Tariffs should distinguish, for example, between fixed cost (capacity) and variable cost (volume) elements.
  - b) In order to send the correct signals to network users about the specific costs they impose on the network tariff should contain signals according to the robust modelling referred to in a) above that reflect these specific costs.
  - c) All tariff structures, if they are calculated or applied incorrectly, will distort trade. There should, therefore, be no presumption in favour of 'point-to-point' or 'postage stamp' tariffs. An 'entry-exit' tariff calculation allows locational signals and tariffs equivalent to 'point-to-point' or 'postage stamp' to be generated automatically as the output of the modelling referred to in a) if they are appropriate.
  - d) Alternatively, prices for network access may be determined by auction. Transport capacity is, however, a near monopoly resource and provision must be made to deal appropriately with any over (under) recovery of total costs.
  - e) Through tariffs, charges or auction revenues TSOs must be able to recover the full costs of their networks that is, broadly: the approved cost existing assets, efficiently incurred variable costs of transmission, efficient new investments and an appropriate rate of return.
  - f) Network users should be able to make transparent and objective comparisons between tariffs.
- 13) TSOs should guarantee network users (shippers, final customers, connecting parties), and also National Regulatory Authorities, the highest level of transparency in respect of tariffs. There should be in the public domain detailed information at least on:
- a) tariff structure;
  - b) connection charge structure; and
  - c) network users should be able to calculate ex ante the majority of total tariff they will be charged for a particular transport service.
- Furthermore:
- d) tariff derivation and connection charge derivation should at least be subject to the approval of National Regulatory Authorities but ideally be in the public domain also;
  - e) information provision should be non-discriminatory: new network users should not be at any information disadvantage;
  - f) supply companies affiliated in any way to the TSO should not gain prior access to any information on TSOs activities which may provide a commercial advantage, for instance knowledge of maintenance programmes.
- 14) Tariffs structures should be as simple to calculate as possible and consistent with the principles of cost-reflectivity and non-discrimination. Unnecessarily complex tariff structures may represent a barrier to entry into the market by new system users.
- 15) Equally important to the attainment of the principles in 1) above are the associated capacity arrangement, which must be non discriminatory and transparent.
- 16) The importance of tariff and capacity arrangements cannot be overestimated. Since flows are a function of both these arrangements, there arises a complex interaction with network investment. Over the cycle of network planning and investment if the flows upon which decisions are made are based upon distorted signals (incorrect tariffs and capacity arrangements) inefficient investment will result.
- 17) Tariffs should facilitate effective, timely and locational signals for efficient long term investment in transport infrastructure. In the sense it should be recognised that the electricity and gas systems are more

and more interrelated. Considering the electricity and gas independently might give participants in both markets contradictory locational signals.

***Comparison of tariff structure:***

18) The discussion below compares different tariffs systems and considers the extent to which they facilitate the objectives outlined in 2) above.

***'Entry-Exit' - a generalised tariff structure:***

- 19) Using a robust analysis of physical flows and costs it is possible to model the network in such a way as to dislocate the exit point from the entry point for tariff purposes. In this sense a clear methodology should be established in order to obtain the tariffs on a consistent basis.
- 20) The key attribute of 'entry-exit' tariffs and capacity is that entry and exit locations are independent. Gas can be sold "entry paid" without there being any restriction as to its final destination. This facilitates the development of 'trading hubs' and stimulates gas-to-gas competition.
- 21) 'Entry-exit' may not clearly indicate congestion deep within a network. Congestion within pipelines and distance related costs can be indicated using a tariff structure consisting of both an entry and an exit fee. For this structure to properly indicate congestion and distance of the entire route a matrix of entry and exit zones can be compiled; the sum of entry and exit being the tariff paid. 'Entry-exit' tariffs might also not be appropriate over very short distances.
- 22) On a day-to-day basis the TSO manages the residual flows on its network. Local demands and supplies are netted, the remaining gas flows are determined by the geographical demand/supply imbalance. This configuration is, in effect, institutionalised 'swapping'. These physical flows determine the necessary capacity of the network and hence cost. There is obviously a probabilistic aspect to this flow modelling since:
- a) scheduled flows might not actually be injected; and
  - b) flow patterns might change over time.
- 23) However, the basis of entry-exit modelling is aggregate flows, which are much less variable than the flows of individual Network Users. TSOs may also be under a legal requirement to plan and operate their network in a prudent manner. It can be reasonably assumed that TSOs can develop, if they have not done so already, procedures for modelling likely flows on their networks. 'On the day' balancing is then a residual activity undertaken by the TSO.
- 24) By modelling residual flows, there can be a significant cost saving which can be passed on to network users in the form of lower tariffs. However, returning all the savings to consumers removes the incentive on the TSO to minimise costs; some retention of savings may be an appropriate incentive mechanism. The overall balance of tariffs, revenues and costs should be subject to appropriate oversight by National Regulatory Authorities.
- 25) 'Entry-exit' tariffs are flexible, and may reduce congestion by providing locational and temporal signals.

***'Point to point':***

- 26) There may be European networks where flows are unidirectional and the network topology is almost linear. In this case, the calculation of entry-exit tariffs will result in a tariff equivalent to a distance related or 'point-to-point' tariff. This obviously is again a special case.
- 27) In this case distance is the main determinant of costs. Obviously, longer distances require a greater capital cost (longer pipes) and greater use of compression.
- 28) Under a distance-related tariff, where there are multiple entry and exits, there is an incentive for network users to swap gas scheduled to flow in opposite directions and hence save the associated transport costs, both capacity and any volume charges. This is obvious a commercial advantage to market players who

have a portfolio of gas supply contracts at a variety of input points. This is one of the main reasons why, as already stated in the Strategy Paper, that contractual flows in a well-interconnected gas grid do not reflect the actual gas flows.

- 29) Where a commercial swap does not occur, the levying of distance related tariffs on both transactions are not cost reflective. This may be mitigated by 'back-haul' adjustments but these rapidly become complex, since the contractual distance has to be determined for each individual gas transport.
- 30) A point to point tariff does not promote trade, except in the case of full coincidence between real physical flows and contractual distance. It is the view of the Working Group that 'Entry-exit' tariff are more adapt to the increasing complexity of the market and of contractual relationships that will result under a liberalised European market.

#### ***'Postage stamp':***

- 31) There may be European networks where the flows are well balanced between the respective locations of injection and offtake. There may also be no enduring constraints of any significance. In this case, the calculation of entry-exit tariffs will result in a 'postage stamp' tariff. This again is obviously a special case.
- 32) If a postage stamp (average cost) tariff is applied where the network modelling implies locationally differentiated tariffs, there will be a cross-subsidisation from 'low cost' entry points to 'high cost' entry points. The tariffs will not be cost reflective.
- 33) Postage stamp tariffs allow incumbents and new entrants to compete on an equal cost basis. Cost reflectivity is, however, very important because non cost reflective tariffs distort markets. In view of the Working Group, therefore, the best approach is to set cost reflective tariffs for all and simultaneously ensure capacity arrangements provide for non-discriminatory access.

#### ***A discussion on the subject of Transit:***

- 34) In July 2000 "A long term vision of fully operational single gas market in Europe – A strategy paper" was published<sup>3</sup>. This outlined a long-term vision of the European gas market which included an analysis by source of Europe's gas supplies. A significant quantity of the gas that is consumed by Europe is imported from outside the European Union and this likely to increase in the future. Some of the implications of this were discussed in the European Commission's Green Paper on Security of Supply<sup>4</sup>.
- 35) The implication of this is that significant quantities of investment take place outside of the European Union in order to bring gas to the European market. Furthermore, within the borders of European Union gas may be also transported considerable distances to its final consumer. Such transactions necessarily involve crossing of numerous national borders.
- 36) There is a long heritage of cross-border trade in gas because, unlike in electricity, it is not possible to create indigenous production. In the European gas market, long-distance transmission of gas crossing several borders is common and well established. The right to negotiate transit is enshrined in European law<sup>5</sup>. However, the Commission's legislative packaged to complete the internal market proposes to repeal the Transit Directive in favour of better-defined third-party access provisions.
- 37) In areas where there are national network and also dedicated transit infrastructure there may be benefits from more integration of the two. Greater physical integration will probably occur where there are financial incentives provided that the regulatory framework is sufficiently flexible to allow it. The financial incentives for greater integration and interconnection will become more apparent as markets become more liberalised.

---

<sup>3</sup> Prepared by the joint working group of the Madrid European Gas Regulatory Forum.

<sup>4</sup> The European Commission – Green Paper "Towards a European strategy for the security of energy supply", COM(2000) 769 Final.

<sup>5</sup> The Transit directives: electricity (90/547/EEC) and gas (91/296/EEC).

- 38) There may be operational implications for the network from transit that are different to other flows that have definite implications in terms of costs. It would be appropriate to these cost differences in tariffs provided that it is done in a non-discriminatory way. For instance, load factor of a transit may be taken into account provided that the load factor is taken into account in the same way for all types of flow.
- 39) In addition to the issue of transit tariffs, there is transit capacity. There are significant quantities of capacity in Europe contracted to transit flows. This is likely to have arisen from two circumstances:
- a) The granting of a long-term capacity reservation related to a dedicated new investment to provide the capacity for flow; or
  - b) The TSO has entered into a 2<sup>nd</sup> generation long-term capacity reservation on existing infrastructure.
- 40) It is possible that under the agreement for the capacity reservation and investment may have been given clearance (formal or comfort letter) by EC/DGCOMP under certain circumstances where the agreement gives rise to objective advantages which outweigh the damage they cause to competition (Art.81(3)) or is found to operate in the general economic interest (Art.86(2)).
- 41) Furthermore, where the owner of pipelines is not assured a rate of return under a regulatory agreement, as a condition of funding financial backers are almost certain to require that capacity be pre-sold for a significant duration of the useful life of the asset. This financial reality goes ‘hand-in-hand’ with the clearances discussed above.
- 42) There are, however, important issues concerning:
- a) Requirements to make capacity held under long-term reservation available to the market upon expiry of that long-term reservation;
  - b) Pre-emption rights to renew capacity rights held under long-term contract; and
  - c) Anti-hoarding measures.
- 43) The CEER believes that once an existing long-term capacity reservation has expired, the capacity should be released to the market in general under non-discriminatory and transparent third-party access procedures. Furthermore, there should be no pre-emption rights to renew such capacity reservations.
- 44) The CEER also believes that all capacity, irrespective of whether held under short- or long-term reservation should be subject to effective provisions that prevent hoarding.