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The features of a successful, on-system Virtual Trading Point

1. Introduction

The implementation of entry-exit transportation access systems creates opportunities to establish **local notional trading hubs** within a single transport system. This paper sets out the features of such hubs which will help attract trading and promote liquidity, if built into the relevant access systems.

A Virtual Trading Point (VTP) can be established downstream of entry points to a system and upstream of exit points, and can exist as a single-node or part of a multi-node model. A shipper should be able to import or produce gas and use entry capacity to transport that gas to the VTP, where it can be sold or retraded. A net buyer at a VTP should be able to acquire exit capacity to take the gas off-system, for export to another system, for injection into storage, or for supply to a consumer. Gas can be traded at the VTP without the need to hold entry or exit capacity.

VTPs may complement physical, regional trading points which can be formed at the interconnects between multiple systems.

2. Features of a hub

One obvious advantage of a VTP is to enable **pooling of liquidity** that would otherwise develop at multiple entry or exit points. By having a single point, or small number of points where gas can be traded, activity will be focused there. In this way an efficient market can be established where buyers can seek the cheapest source of gas from those able to offer gas at the hub, and sellers can seek the parties who place the highest value on the gas available. Transaction costs are reduced as less time is spent identifying who is able to buy or sell at a particular location out of a large potential range of locations. Trading and information systems need only be developed in respect of a single point (or small number of points).

At a VTP, non vertically-integrated participants can manage an upstream or downstream portfolio in isolation, without the need to engage in sales or production. Barriers to entry are reduced, as parties do not need to hold a vertically integrated business. Those who choose to be vertically integrated between production/import and supply have a liquid location to trade out mismatches in positions caused by timing of new supplies or changes in customer portfolios in the longer term, or to ensure efficient utilization of balancing options in the shorter term.

Being contained within a single transportation system, a VTP is therefore only subject to **one national regulatory authority**, which would not be the case for hub located at national borders, which could span multiple regulatory regimes. This also means that there are no taxation complexities that can exist at international hubs.

A VTP can also be used as a location for operation of a **balancing market** or for **gas release programmes**. In the case of a balancing market, it allows a TSO to select from available offers (or bids) from a larger number of potential locations brought into that hub, thus ensuring that the hub is being balanced transparently at the lowest cost. (Where a TSO requires action in respect of a particular location, this can be specified, allowing bids or offers to be taken out of price order.) Where a gas release programme is to be offered, then execution of the programme at a VTP allows it more easily to be formed from a combination of contracts rather than related to a specific purchase contract of the releasing party. Thus the design of the release programme can be made more flexible, for example to mirror the average swing and take-or-pay characteristics of the releasing party's portfolio.

3. Conditions to be built into transportation access terms

Hub access terms can be included directly in transportation contracts, without the need to develop separate hub services agreements. These can specify the obligations of traders, pipeline users, and the TSO (or a suitable independent body) as hub operator. Where this is done, hub terms should include the following:

- Terms should allow for **title transfer of gas** (where title is held by the shippers) or an equivalent transfer of imbalances (where title has been passed to the TSO).
- **Allocations should be made equal to nominations**, making the hub "super-firm", as trades can then be held whole. Only parties bringing gas onto the system or taking gas off the system can cause a physical imbalance, and be charged for being long or short in the system. (The only notable exception would be where a trade had failed because of incorrect entry. In such circumstances, the terms should clarify whether no gas is allocated, or a "lesser of" rule applies.) This allows trading chains to be held whole in a situation of imbalance, where the trading chain has not contributed to any physical imbalance.
- A VTP can be built into the balancing regimes of transportation access systems as a location for **imbalance cashout**, and as a location for trading out imbalances between shippers. In systems with low levels of competition, onerous imbalance charges and few flexibility services, *ex post* imbalance trading can be introduced at the VTP as a transitional measure.
- There should be **clearly defined imbalance charges**, which can be referenced in trading contracts for incidents such as a failure to perform. These should be market-based and not unduly punitive.
- Credit and governance issues can be treated generally as part of the transportation terms. TSOs should assess the creditworthiness of shippers and traders, and manage all credit risks through this process, and should not seek to pass further credit risk back to shippers in the event of counterparty default.

4. Multi-node model

Virtual Trading Points are possible under a multi-node model, but risk fragmenting already low levels of liquidity in a nascent traded market. This can be countered, to some extent, by allowing imbalances in sub-nodes to be taken to a principle node, and traded or cashed out there. Unless separate balancing markets are to be established for each node, the transfer of imbalances between nodes should be possible at transparent, predetermined prices.

A multi-node model could be seen as transitional, reducing numbers of nodes as the TSO gains experience of operating an entry-exit system. The treatment of inter-node capacity is key to this transition, and to the speed of developing liquidity at individual nodes. If sufficient inter-node capacity exists, or can be created by system reinforcement or virtual capacity, then it may be possible to consolidate market trading in a primary location, with other nodes priced relative to the liquid point, especially if imbalances can be aggregated and traded across nodes. This service does not require the TSO to hold back capacity to facilitate.

In theory, it should equally be possible to establish a single node that covers multiple networks, although this has not yet been implemented in Europe. This would follow a similar path to the transitional multi-node model, where improved capacity between nodes would create the effect of pooling liquidity at key points, which could be used for price reporting.

5. Further thoughts

Access to **transportation capacity** in and out of a hub is critical. Capacity availability and utilization rates should be published in accordance with the Gas Transmission Regulation¹. Availability should be maximized through secondary trading of capacity, use-it-or-lose-it, and sales of interruptible capacity.

It may be possible to construct **simplified access terms** for parties who are not physically shipping gas on the system, e.g. pure traders or exchange operators.

Costs of developing a basic hub can be recovered through general transportation tariffs, as a service ordinarily required by shippers. This should not prevent the later establishment of an exchange or more sophisticated hub arrangements, which can provide value added services in return for fees.

Standard trading terms should be established by those using the hub, but the more complete the access terms, the fewer eventualities need to be addressed in a trading contract, which allows simplified trading arrangements. EFET has developed, and recommends its General Agreement concerning the delivery and acceptance of natural gas, which seek to standardize trading terms across hubs and other trading points as far as possible. Where specific conditions must be addressed for relevant transportation systems, specialized appendices have also been developed².

Where historical contracts contain **destination clauses** limiting delivery to a physical point downstream of a VTP, then the relevant VTP could be assigned as an alternate offtake point. This would further stimulate liquidity and provide a means for large users and resellers to manage their contractual commitments.

¹ European Regulation EC/1775/2005 on Conditions for Access to the Natural Gas Transmission Networks

² The EFET General Master Agreement and Appendices may be downloaded from the EFET website www.efet.org