

‘Appropriate design for an oversell and buy-back scheme’

Implementation Guide

EFET¹ Gas Committee

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¹ The European Federation of Energy Traders (EFET) promotes and facilitates European energy trading in open, transparent and liquid wholesale markets, unhindered by national borders or other undue obstacles. EFET currently represents more than 100 energy trading companies, active in over 27 European countries. For more information: www.efet.org.

Objective: ensuring economic efficiency

Oversell and *buy-back* is a mechanism for resolving contractual congestion without reducing the firm capacity rights of shippers. Network users do not always use all the capacity that they have booked. When all the technical capacity at an interconnection point is booked, but flows account for less than that capacity, *overselling*, which essentially means selling some firm capacity rights twice, *would be economically efficient*. *Buy-back* of some or all of the oversold capacity rights is necessary when holders of capacity rights are trying to flow more gas than the system can accommodate. When designed appropriately, buyback can *ensure fair and efficient distribution of the risks* associated with the functioning of the scheme between Transmission System Operators (TSOs) and the users of the network.

In this context, buy-back constitutes a mechanism for dealing with contractual congestion. While buy-back may be a legitimate means for dealing with physical constraints, this is a separate issue and should be dealt with elsewhere.

Principles for an appropriate design of an oversell and buy-back scheme

1. Baseline calculation².

It is essential that the baseline capacity is set in a way that would ensure that TSOs maximise the amount of available capacity at interconnection points. To illustrate the point, if the available technical capacity at an interconnection point is equal to 100%, but actual flows are normally equal to 80%, then TSOs should set the baseline at 100% and could sell capacity at 120% to optimise the use of the system³.

In defining their baseline capacity, TSOs should ensure that they can honour the capacity commitment in normal circumstances. If TSOs need to buy capacity back below the baseline, then this would be an indication that the baseline has not been set at the appropriate level, or that TSOs have not planned their business appropriately. Adequate risk-sharing mechanisms shall provide the right incentives to set the baseline at the appropriate level.

2. Transparency.

Transparency is a central component of a well-functioning scheme for oversell and buy-back of capacity. In order for the scheme to deliver the anticipated efficiency gains, it is essential to make sure that the baseline capacity is set as reasonably as possible. TSOs may have an incentive to set their baseline as low as possible to minimise their risks by ensuring the

² In order to be compliant with EU Regulation EC 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks (hereafter, the Gas Regulation):

“Transmission System Operators shall publish a detailed and comprehensive description of the methodology and process, including information on the parameters employed and the key assumptions, used to calculate the technical capacity.” (Art. 2)

“Technical capacity” is defined as “the maximum firm capacity that the Transmission System Operator (TSO) can offer to users, taking account of system integrity and the operational requirements of the network” and must be published “on a numerical basis for all relevant points including entry and exit points.” (Art. 18, Para. 3).

However, the Gas Regulation does not elaborate on the process of calculating the baseline.

³ See Appendix for fully worked example.

baseline is easily within their systems' capabilities⁴. To prevent such inefficiencies, the calculation of the baseline should be subject to the approval of National Regulatory Authorities (NRAs) in consultation with market participants. The Agency for the Cooperation of Energy Regulators (ACER) should also audit the way the baseline is set. TSOs' revenues from the oversell and buy-back scheme should be made subject to public scrutiny. They should constitute only a relatively minor component of the TSO's total income, provided that the baseline is set properly.

3. *Overselling capacity.*

The decision of TSOs about how much capacity to oversell would depend on the incentive mechanisms set in place. TSOs should not be overselling capacity when they already know that they would need to buy it back. Overselling capacity should not affect the (re) nomination rights associated with existing capacity which shippers still hold. TSOs should engage in overselling and buy-back when they expect or experience contractual congestion.

4. *Buying back capacity.*

- *Triggering buy-back.* Interruptible capacity should be sold only after all firm capacity has been sold⁵. TSOs should interrupt interruptible capacity first and only then engage in capacity buy-back, if there should be such a need. So long as on the day TSOs have not sold more than the total technical capacity/baseline capacity or flows are less than the baseline, they should not need to buy capacity back⁶.
- *Risk-sharing.* There should be an appropriate risk-sharing mechanism embedded in the design of the scheme, so that TSOs have sufficient incentive both to offer capacity for sale and to bear a fair share of the costs of buy-backs. Cost-sharing with network users should be of relevance *only* for capacity sold above the baseline and then bought back. In theory, the buy-back price should be related to the opportunity cost of not being able to transport and sell gas for those shippers who offer to sell back capacity. Nevertheless, under certain circumstances a cap might be needed on those buy-back costs paid by shippers. Such a possibility, however, must be consistent with any upside revenue sharing between shippers and TSOs.
- *Setting a merit order for buying back capacity.* TSOs should aim to buy back the cheapest capacity first via a market-based mechanism where shippers make market-based offers to sell capacity back to TSOs. Locational balancing should not be used as a way to avoid risk-sharing. If TSOs have oversold capacity at a certain interconnection point, they should not be able to engage in locational balancing before they have bought

⁴ This would not necessarily impact the amount of revenue that a TSO was allowed to earn. Allowed revenue is often based on the approved rate of return on the financial value of the asset base, not on the quantity of capacity rights that TSOs sell. Setting the baseline too low may also create the opportunity for the TSO to earn additional revenue from overselling and buyback without incurring any additional risk.

⁵ This assumes of course that TSOs continue to offer firm capacity for sale up to and including the gas day, or until the firm capacity has been sold out. Failure to offer firm capacity for sale simply because the TSO does not have the processes in place, and then refusing to offer interruptible capacity for sale because the firm capacity has not been sold out, creates artificial constraints and unnecessarily inhibits cross border trade. EFET is concerned that this appears to be occurring in Germany where some TSOs do not sell out their firm capacity on a day ahead basis, and then fail to offer the remaining firm capacity for sale within day.

⁶ Buying back capacity in cases of physical constraints is a separate issue and should be addressed elsewhere.

back the necessary capacity. Consistency should be ensured between oversell and buy-back mechanisms and the EU Network Codes on Balancing and Capacity Allocation Mechanisms.

- *Cancelling buy-back.* There must be clear criteria for emergency situations in which cancellation would be possible. TSOs would have to demonstrate that they have made every possible effort to use buy-back mechanisms. High prices of buy-back capacity shall not constitute such a reason and enforcement action against the TSO by the regulator should be considered if a TSO declares an emergency for purely commercial reasons.

5. *Firm and interruptible products.*

It is essential to establish a clear European capacity allocation regime including only firm and interruptible capacity products⁷. A well-functioning entry/exit regime requires proper firm capacity rights. In that regard, an oversell and buy-back scheme should be conceived as a way of ensuring that capacity is offered as a proper firm right and the products subject to the scheme should be considered as firm products.

6. *Gradual extension of the scope of the scheme.*

An oversell and buy-back scheme should start with the short-term, e.g. implementation for within-day, day-ahead or month-ahead products. Progressive implementation should then extend the scheme to longer-term products.

⁷ This would also be useful in the capacity bundling process required by the EU Network Code on Capacity Allocation Mechanisms.

APPENDIX. Simplified worked example of Overselling and Buyback.

Physical System Capacity	100 mcm/d
Expected flows during period	80 mcm/d*.
Firm capacity rights sold	100 mcm/d*.
Scope for overselling	20 mcm/d*.

* The expected flows imply that those shippers who have bought 100 mcm/d of capacity do not normally use all that capacity in the period concerned. This enables the TSO to sell up to an additional 20 mcm/d to shippers who do wish to flow gas during this period.

Therefore, total flows for the period, after capacity has been oversold will be as follows:

Flows by original capacity holders	80 mcm/d (20 mcm/d of capacity rights unused)
Flows by new shippers (using oversold capacity)	20 mcm/d
TOTAL FLOWS	100 mcm/d (equals system's physical capacity)

If shippers now try to flow, for example, 110 mcm/d, using their capacity rights, the TSO will have to "buyback" capacity rights to prevent shippers from trying to flow more gas than the system can physically accommodate. This is because if the shippers do not have the capacity rights, they cannot flow gas. In this simple example it is assumed the TSO will have to buy back 20 mcm/d of capacity rights to ensure that capacity rights equal the physical capacity of the system. Once the capacity rights have been bought back shippers will only be able to nominate 100 mcm/d of gas flows which is within the system's capability. However the amount of capacity the TSO will have to buyback will depend on who sells back capacity and the effect that it has on nominations. Nonetheless, the amount of capacity the TSO will have to buy back will not be greater than the amount of capacity oversold.