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GSE briefing paper

On transmission tariffs to and from storage facilities

About GSE

Gas Storage Europe (GSE) represents the interests of 32 Storage System Operators with around 110 storage sites in 16 countries in Europe, representing approximately 84 bcm, i.e. 87% of EU technical storage capacity. GSE is one column of Gas Infrastructure Europe (GIE), the European association of transmission, storage and LNG terminal operators.

GSE is committed to improving the regulatory and investment framework for storage activities in order to help its members to continue providing secure, efficient and valuable storage services to the market.

1. Storage users in entry/exit regimes suffer from double charges for transmission

Storage facilities in Europe are usually connected to transmission systems. Latest with the implementation of the Network Code on Harmonized Transmission Tariff Structures (NC TAR), all Member States will introduce entry/exit systems wherein traders and gas suppliers pay entry and exit tariffs to enter and/or exit the system. However, in the vast majority of transmission systems, storage users are also asked to pay often substantial transmission fees to make use of gas storage facilities, i.e. when injecting into and withdrawing gas from such facilities.

GSE believes that requiring storage users to pay additional transmission tariffs at storage connection points (SCPs) over and above those already paid upon entering and/or existing the system – a measure currently applied in most EU markets as evidenced below– in effect amounts to a double charge because the same storage users have already paid or will have paid for the use of the system when they brought their gas in and/or out of the system.

It is worth noting that in this respect, storage facilities pointedly differ from other entry/exit points, including LNG terminals, because they are not a net source of demand for transmission capacity: they merely shift gas consumption from one period to another. This obviously penalizes and discriminates those traders and gas suppliers who book storage capacity and as a consequence is detrimental to the use of storage facilities, the cornerstone of security of supply in the EU.

In its justification document[1], ACER concluded that if the objective is to promote efficient investment in the network and also minimize adverse impacts on cross-border trade, the best way forward is to focus on 'net' costs, i.e. costs minus benefits.

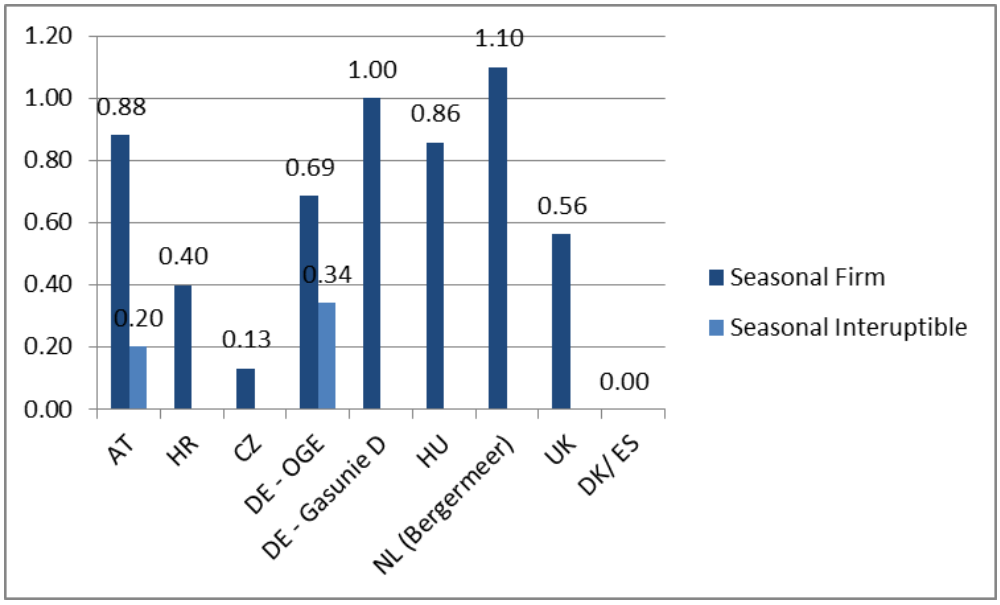
[1] ACER: "Assessment of Policy Options: Justification document for Framework Guidelines on rules regarding Harmonised Transmission Tariff structures," (ACER-JD-2014-G-01), 31 March 2014

2. Current transmission tariffs at SCPs in many Member States have no rational basis and have negative impact on EU policy objectives

Tariffs actually paid by gas traders and suppliers to access storage facilities in the EU vary from zero for both entry and exit, for example in Denmark, to over EUR 1/MWh of capacity in the Netherlands (see Figure 1). To put this into perspective, seasonal spreads (i.e. the spread between the price of gas in winter and in summer), the key indicator used by storage users when valuing storage capacity, are currently at around EUR 1.50/MWh and the costs of transmission can therefore represent a significant portion of the total costs that storage users entail.

As the real costs of TSOs of delivering gas to and from storage facilities should be broadly similar given the location of storage facilities directly on the main transmission pipelines, such differences cannot be justified.

Figure 1: Sample overview of transmission tariffs for seasonal gas storage facilities in selected entry/exit zones[2]



Brattle indicated in a report for ACER[3] that different treatment of gas storages in various Member States may lead to regulatory competition between Member States, potentially leading to inefficient results. In addition, Brattle concluded that transmission tariffs for gas storages are not always cost-reflective.

In addition, GIE would like to point out that too high transmission tariffs are detrimental for the competitive position vis-à-vis other flexibility sources.

[2] Transmission tariffs for a typical 100-day storage product (in EUR per MWh of gas stored)
[3] The Brattle Group: "Impact Assessment for the Framework Guidelines on Harmonised transmission tariff structures," 6 August 2012

3. Storage facilities bring numerous benefits to the gas system

Actually storage facilities reduce the costs of the gas systems because

a) Storage is not an additional source of demand or supply

Gas storage is different from all other entry/exit points in that it is not a net source of gas demand or supply. Rather, it shifts consumption from one period to another.

b) Storage helps rational and efficient investments in the grid

Because storage facilities are usually located close to centers of demand, transmission pipelines need to be seized only so that they can meet the average and not peak demand, with storage facilities making up for the difference between actual and average demand. Storage therefore allows a reduction in the size and cost of the transmission network. By way of example these savings have been estimated at the level of up to GBP 70 million per annum in the UK alone[4] and are considered to range between 9 and 16% of avoided capital expenditure across Europe[5].

c) Storage reduces operating expenses of TSOs

Storage facilities help TSOs reduce the cost of compression, which is one of the most significant elements of their operating expenses. It can be roughly estimated that storage helps to save around 20% of operating expenses related to gas transmission.

d) Storage helps reduce gas price volatility

Storage helps to reduce the costs incurred by end customers in that it helps to reduce price volatility thus lowering the costs related to retailing. Pöyry estimates that storage reduces price volatility by 17 percent on average within the EU under normal conditions and up to 57 percent in case of extremely cold weather.

e) Storage enhances system stability and balance

Storage facilities help maintain system integrity and balance thus supporting transmission operators in operating their pipeline network. This may be particularly crucial in system stress situations.

f) Storage contributes to Security of Supply

Having gas in storage reduces dependence on imports and import infrastructure in the event of network failure or supply interruption. We note in this respect that while it has proven notoriously difficult to quantify this benefit, the potential negative impact on citizens and businesses is enormous: European regulators reported that the losses caused from a two-week supply disruption in January 2009 reached a total of EUR 800 million,[6] while another study analyzing the cost of natural gas outage in Ireland put just the cost of lost gas-fired power generation at between EUR 0.1 to 1 billion per day depending on the time of day and season.[7]

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[4] Waters Wye Associates: "UK gas transmission system benefits from gas storage – an update to the initial report produced in 2007," 23 April 2014

[5] Pöyry: "Transportation tariff discounts for gas storage," November 2012

[6] "Increased infrastructure investment through regional coordination: Enhancing EU energy security", Walter Boltz, Chair of ERGEG's Gas Working Group at the 2009 Regional Initiatives conference in Brussels, 17 November 2009

[7] The Economic and Social Research Institute, Dublin: "The Cost of Natural Gas Shortages in Ireland," July 2010

4. Conclusions and recommendations

Gas storage facilities provide numerous benefits to the system resulting in avoided investment and lower operational costs. If these benefits are not reflected in the tariffs for SCPs, storage users are cross-subsidizing other network users. It is therefore important for any tariff methodology to recognize all the costs and all the benefits.

Not only does this practice disregard the fact that storage users are paying twice for the same service, it also has unintended negative consequences. Last but not least, it completely disregards the real and considerable benefits of storage facilities to the gas system as a whole as well as to end customers, be it households or industry.

Based on the above, GSE strongly recommends that the proposed Network Code on Harmonized Transmission Tariff Structures reflect the above arguments and points in a specific way so that NRAs can use the text of the Network Code as a tangible guidance when setting transmission tariffs at SCPs located on the networks for the regulation of which they are responsible. Therefore, GSE proposes the following amendment to the network code:

Amendment of the network code text

Article 20
Storage

When the national regulatory authority sets or approves the transmission tariffs for the storage facilities, the following shall be taken into consideration:

(1) *the net benefits that the storage facilities ~~may~~ provide to the transmission system;*

(2) *the need to promote efficient investment in the transmission system;*

(3) *the need to minimise detrimental effects on cross-border trade;*

(4) *that storage facilities are not a net source of supply or demand and that storage users have already paid entry and exit tariffs to use the transmission network.*