



GSE Position Paper on Capacity Allocation Mechanisms and Congestion Management Procedures

Ref: 08GSE209

Introduction

In January 2008, ERGEG published its annual Work Programme aimed at continuing working on the development of the energy regulatory framework in Europe. In the area of underground gas storage, **ERGEG announced that guidelines for good practice on capacity allocation mechanisms (CAM) and congestion management procedures (CMP)** for storage would be developed in 2008. Furthermore, follow-up work on these GGP is envisaged for 2009.

Also in January 2008, GSE decided to proactively work on the topic of capacity allocation and congestion management and to prepare a GSE position paper on CAM&CMP with a view to providing ERGEG and other institutional players and associations with valuable input.

To this end, **GSE launched an internal survey** in order to obtain an overview of the currently applied CAM&CMP mechanisms throughout the EU and to offer some practical guidance on these mechanisms. A vast majority of GSE members - **24 SSOs representing** some 95% of total GSE storage capacity (i.e. 61 bcm) - completed an internal GSE questionnaire. GSE members' storage capacity accounts for about 85% of the total underground storage capacity of the EU. GSE members who have responded to the questionnaire therefore represent **81% of the total underground storage capacity of the EU.**

All replies have been statistically analysed and summarised by GSE to identify the current “**state of play**” on CAM&CMP on the basis of which the present “GSE position paper on CAM&CMP” has been elaborated. The results of the survey are also attached as an annex to this position paper to support the statements and figures provided by GSE.

The present **position paper** has been structured following the **five conditions for CAM&CMP** stated in the **GGPSSO** and as such provides the main findings from the survey regarding each of the conditions (GGPSSO, point 4, section 4.1), namely:

“Storage capacity allocation mechanism and congestion management procedures shall:

- a) facilitate the development of competition and liquid trading of storage capacity and be compatible with market mechanisms including spot markets and trading hubs while being flexible and capable of adapting to evolving market circumstances and discourage hoarding;*
- b) take into account the integrity and the maintenance of the storage system concerned as well as security of supply where relevant legal rules and incumbent upon SSO;*
- c) not create undue barriers to market entry and not prevent market participants, including new market entrants and companies with small market share, from competing effectively;*
- d) ensure the maximum availability and efficient use under economic and non-discriminatory conditions of technical storage capacity;*
- e) be subject to consultation with storage users.”*

Executive Summary

- 1) In the final 2006 report on monitoring the implementation of the GGPSSO, ERGEG stated with regard to storage CAM&CMP: *"It is important that storage capacity is allocated on a fair and non-discriminatory basis to ensure that no distortions or barriers to new entrants are created within the market"*. GSE fully shares this view and believes that **effective and non-discriminatory procedures** for capacity allocation and congestion management are central to both the effective functioning of and the level of security of supply in the European gas market. Furthermore, both **transparent access conditions and appropriate CAM&CMP** should be **in place** to ensure that **no barriers** exist that would impede **new market entrants**.
- 2) The results obtained from the GSE questionnaire indicate that **the vast majority of GSE members** apply CAM&CMP which are principally designed by the SSO, **in consultation with the storage users**, and approved by the National Regulatory Authority. This shows that GGPSSO are complied with in this respect. GSE is of the opinion that the involvement of storage users, regulators and SSOs in drafting CAM&CMP rules is a necessary basis for making them more effective and non-discriminatory. Nevertheless, GSE would be happy to consider any suggested further improvements on CAM&CMP.
- 3) The results of the GSE questionnaire also indicate that more than two-thirds of the commercial working gas volume are operated under nTPA regime and that the storage facilities with the most storage users operate under both r-TPA and n-TPA. Another finding indicates that in **nearly all the countries surveyed**, a **common regulatory framework** regime regarding CAM&CMP **applies** to all **SSOs in the given country**. In general, **the existence of common principles regarding CAM&CMP facilitates the entry and operation of new market entrants**.
- 4) Capacity allocation mechanisms and congestion management procedures are important as many storages are fully booked and **contractual congestion remained an issue in 2007**. **The data collected by GSE indicate that in 2007, around 62% of the respondents' commercial storage capacity was contractually congested**. Moreover, **the majority of responding SSOs said they envisaged experiencing contractual congestion during the current gas year as well**. On the other hand, the responses also show that secondary markets (for capacity and/or gas exchanges) are a very common instrument applied by SSOs. In fact, GSE figures point out that almost **91% of SSOs** responding to the GSE questionnaire **offer the possibility of using a secondary market to their users**. This demonstrates that secondary markets for storage capacity can be considered as being fairly well developed throughout the EU.
- 5) As stated in more detail below, GSE notes that the **most widely used CAM procedures (following client's portfolio, first come/committed – first served and auction)** and **CMP procedures (Secondary market, pro-rata allocation, auctions, interruptible capacity and some kind of UIOLI)** are well extended throughout the EU Member States and among different SSOs.
- 6) Finally, in terms of **transparency**, GSE found that **information about contractual congestion is published for more than 88% of commercial working gas volume** (16 SSOs). Although this information is mainly for the current gas year, it is worth noting that over **50% of the total commercial working gas volume is subject to contracts with duration of one year or less**.

Findings

ITEM A, point 4.1 of GGPSSO

“Storage CAM&CMP shall facilitate the development of competition and liquid trading of storage capacity and be compatible with market mechanisms including spot markets and trading hubs while being flexible and capable of adapting to evolving market circumstances and discourage hoarding”

To facilitate the development of competition and liquid trading of storage capacity it is important that third party access to storage facilities is available to market participants and that capacity is not withheld from the market.

In this respect, it can be observed that over one-half (56%) of the surveyed working gas volume is in storages that have more than 10 primary capacity users; almost one-third (28%) of the working gas volume is in storages that have between 4 and 10 primary capacity users; and only 16% of the working gas volume is in storages that have 3 primary capacity users or less. It is therefore apparent that third-party access is widely implemented and leads to real access for different market participants.

Furthermore, less than 3% of the total storage working volume is not covered by anti-hoarding measures such as UIOLI and/or the facilitation of a secondary market for capacity.

Finally, nearly all SSOs seek input from storage users when designing their CAM&CMP .

In general, it is difficult to verify whether hoarding occurs: if a customer does not use storage capacity, it may be caused by weather conditions or momentary situation on the gas market. Customers are interested in booking storage capacity for they are uncertain of the effect of all these possible influences. Storage capacity is needed in order to minimize the customers' risks and because SSOs cannot penalise their costumers for external influences, SSOs are not in a position to define whether hoarding is taking place or not.

ITEM B, point 4.1 of GGPSSO

“Storage CAM&CMP shall take into account the integrity and the maintenance of the storage system concerned as well as security of supply where relevant legal rules are incumbent upon the SSO”

GSE considers that ensuring the integrity and proper maintenance of the storage system – a fundamental responsibility of any SSO – is crucial when designing CAM&CMP. SSOs have always paid special attention to this issue since smooth functioning of storage facilities must be ensured if CAM&CMP are to be effective.

As regards security of supply methods prescribed by the NRAs or governments, GSE would like to underline two main elements: Public Service Obligations (PSOs) and strategic stocks. However, GSE believes that the availability of commercial storage is a crucial contributor to security of supply.

Answers from GSE members indicate that storage is important with regard to PSOs. In many Member States, PSOs lie with TSOs and/or suppliers who must ensure security of supply for non-interruptible clients in case of periods of extremely cold weather or supply disruptions. TSOs and/or suppliers thus conclude contracts with SSOs for the storage capacities required for such purposes.

According to the data obtained by GSE, mandatory requirements with respect to holding of strategic stocks exist in Hungary, Italy and Spain (representing approximately one-third of total storage capacity).

The GSE survey indicates that a large majority of respondents (80%) cooperates with other SSOs or TSOs in order to provide efficient capacity allocation. It was also noted that in case of contractual or physical congestion, 58% of the respondents cooperate with other SSOs or TSOs.

Based on the replies from GSE members it can be stated that a large majority of storage CAM&CMP throughout the EU takes into account the integrity and the maintenance of the storage system concerned as well as security of supply where relevant legal rules are incumbent upon the SSO.

ITEM C, point 4.1 of GGPSSO

“Storage CAM&CMP shall not create undue barriers to market entry and not prevent market participants, including new market entrants and companies with small market share, from competing effectively”

All EU Member States have a common regulatory regime for all SSOs with the exception of the Netherlands and the UK, where stricter regime applies to companies with a position of economic dominance.

The results obtained by GSE show that the most widely used type of CAM is *“Following the clients’ customers’ portfolio”* followed by *“First committed – first served”* and *“First come – first served”*. These 3 allocation mechanisms account for 84% of the total commercial storage capacity of the responding companies. When looking at CAM for planned storage capacity, the results show that auctions and *“First committed – first served”* are the tools preferred by the respondents. This could point to a more diversified use of CAM measures by GSE members in the future.

When contractual congestion occurs, SSOs use a variety of mechanisms for congestion management. The most widely used mechanisms are pro-rata allocation, secondary markets, auctions, interruptible services and to some degree also UIOLI. In case of physical congestion, reductions in interruptible capacity are used as an additional tool.

When UIOLI is used, it is generally at the initiative of SSOs. The duration of UIOLI can vary but capacity is usually not lost permanently.

Almost all SSOs provide different arrangements for access to secondary markets. Some of the responding SSOs are even organised in a secondary storage capacity trading hub (Store-X).

Finally, when asked directly, the following requirements were mentioned by some SSOs as ensuring an objective, transparent and non-discriminatory treatment when it comes to CAM&CMP:

- Consultation with or the approval by the NRA of access rules/storage code,
- Publication of access rules/storage code,
- Non-discriminatory treatment of customers (same treatment if two or more users are under/fulfill the same conditions) monitored by the NRA, if needed.

ITEM D, point 4.1 of GGPSSO

“Storage capacity allocation mechanisms and congestion management procedures shall ensure the maximum availability and efficient use under economic and non-discriminatory conditions of technical storage capacity”

Ensuring maximum availability of storage capacity is an important issue for SSOs given the fact that 84% of capacity is fully contracted for one year and contractual congestion existed for 62% of capacity in the

previous storage year (physical congestion existed for only 26% of total capacity, but only for 4% of total capacity for more than 50% of the time).

To maximise the amount of capacity available to the market and to manage contractual congestion, SSOs adopt anti-hoarding mechanisms (mainly UIOLI) and offer capacity trading through secondary markets without creating undue economic barriers. Only three SSOs out of the 24 respondents do not make any secondary market tools available.

As regards UIOLI, less than one-third of the responding SSOs do not apply this mechanism; however, of these, only one SSO (representing only 0.8% of the total storage capacity) experiences contractual congestion. In cases where there is available capacity, lack of UIOLI is not so critical compared to other cases where there is no available capacity. In general, the most commonly applied rule is “forward looking” UIOLI (use must be confirmed before notice period), implemented by 33% of SSOs.

To avoid hoarding of capacity by incumbents, anti-hoarding mechanisms are fairly well developed among GSE members: almost all SSOs adopt more than one method (mainly UIOLI and secondary markets), but with different particularities that reflect national legislation in force in each country. It should be also remarked that some SSOs apply a limitation on the maximum allowed storage capacity to be contracted by each user.

ITEM E, point 4.1 of GGPSSO

“Storage CAM&CMP shall be subject to consultation with storage users”

A vast majority of respondents has designed capacity allocation mechanisms (90%) and congestion management procedures (90%) through a consultation process with storage users regardless of who designs CAM&CMP. This confirms that GSE members by and large comply with the GGPSSO in this respect and that non-discriminatory and transparent treatment of users is being fostered.

A consultation process regarding CAM&CMP that involves storage users helps ensure a transparent and non-discriminatory treatment and also allows SSOs to take into account market demand trends.

Conclusions

GSE agrees that while a certain degree of harmonization in the field of capacity allocation and congestion management may be useful, the specific features of national regulatory frameworks and economic fundamentals supportive of liberalized markets should be always taken into account when elaborating any future guidelines on CAM&CMP.

GSE believes that technical aspects related to the operation of different types of underground storages should be also considered as such differences may impose restrictions or requirements when designing adequate and well-functioning CAM&CMP mechanisms.

GSE believes that the future guidelines for good practice envisaged by ERGEG should recognize the above-mentioned aspects and leave room for SSOs to adopt any of the multitude of CAM&CMP mechanisms as long as they promote the market with storage capacity and the development of new capacity and are transparent and non-discriminatory. Furthermore, the mechanisms should comply with the underlying principles of capacity allocation and congestion management as set out in the GGPSSO.

GSE recognizes that contractual congestion remains an issue. However, SSOs generally provide a high degree of transparency as regards the duration of contractual congestion periods and 9 out of 10 SSOs offer users the possibility to sell and buy storage capacity using secondary market instruments, thus helping to alleviate congestion. Clearly, the best solution to contractual congestion consists of ensuring a regulatory climate that is predictable and provides incentives for investment in new storage capacity.

GSE would like to underline its readiness to cooperate and provide input and expertise to ERGEG in its work on the preparation of the GGP on CAM&CMP.

Annex 1

Glossary

This glossary provides the definition and the necessary explanations regarding the terms and concepts used in the questionnaire.

General terms

Storage capacity

Storage capacity is space (expressed in normal cubic meters or energy), injectability and deliverability (expressed in normal cubic meters or energy per time unit). Injectability and deliverability can be firm or interruptible.

PSO

PSO means Public Service Obligations. Member States may impose on undertakings operating in the gas sector, in the general economic interest, Public Service Obligation which may relate to security, including security of supply, regularity, quality and price of supplies, and environmental protection, including energy efficiency and climate protection.

Storage rights allocation

Depending on the national legislative and regulatory framework (Italy, France, Belgium), in order to allow the parties to fulfil PSO, they are granted some rights to contract storage capacities.

Storage capacity allocation

Bundled or unbundled storage capacity is assigned on a firm and interruptible basis, as defined in the GGPSSO, to potential storage users.

Storage quantities allocation

Metered gas quantities are allocated for injection and withdrawal at the end of the balancing period to the respective customers/ contracts.

Technical capacity

The term "technical capacity" means the maximum firm capacity that the SSO can offer to storage users, taking into account the integrity and the operational requirements of the storage system. The "technical capacity" thus explicitly refers to "firm capacity".

Maximum capacity

The term "maximum capacity" means the maximum of both firm and interruptible capacity that the SSO can offer to the storage users, taking into account the integrity and the operational requirements of the storage system.

Contractual Congestion

"Contractual congestion" means a situation where the level of the storage capacity demands exceeds the technical capacity. In other words, more firm storage capacity is demanded than can be made available.

Physical Congestion

"Physical congestion" means a situation where the demand resulting from the level of nominations for both firm and interruptible capacity exceeds the technical capacity available at some point in time. In other words, the nomination for flows against firm and interruptible storage services cannot be met. It is worth highlighting that physical congestion can only occur when contractual congestion occurs.

Terms relating to capacity allocation mechanisms and congestion management procedures

First committed, first served / First come, first served

Storage users are served in the order of contracting or requesting capacity.

Following the clients' customers' portfolio

Storage users are granted rights (within the national legislative and regulatory framework) to request storage capacities depending on their customers' portfolio.

Auction

Available capacity is auctioned and allocated to the storage users making the best offers (based on price and sometimes also contract duration). Each satisfied demand may have a different price.

Pro-rata allocation

A proportion of capacity requested by a certain storage user in relation to total requests made by all storage users corresponds to the proportion of the available capacity which is allocated to this storage user. The storage user is able to refuse capacity if allocation is too small.

Lottery

All storage users requesting capacity participate in a lottery for certain pre-determined amounts of capacity, where bids can be made for one or more capacity "lots".

Secondary market

Secondary markets enable the resale or trade of already sold capacities (injection, withdrawal, volume, bundled or unbundled) and/or gas in store between two or more storage users. This exchange may or may not include the transfer of the rights and obligations ensuing from the storage contract. Title transfer occurs when the rights and obligations are transferred through a new contract signed between the SSO and both storage users.

UIOLI

In this case, the original capacity holder does not lose any unused capacity, but the SSO offers this unused capacity on the primary market on an interruptible basis. The capacity is offered to other storage users, but falls back to the initial capacity holder at the moment he nominates it for use.

Note: All mechanisms may include a priority management process (long term vs. short term, general interest purposes).

Annex 2

Statistical Summary of the answers to GSE CAM&CMP Practices Questionnaire

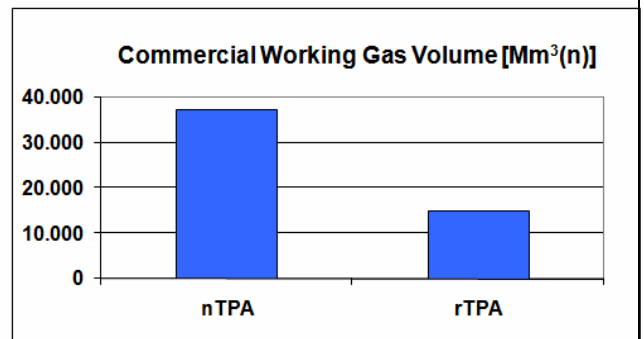
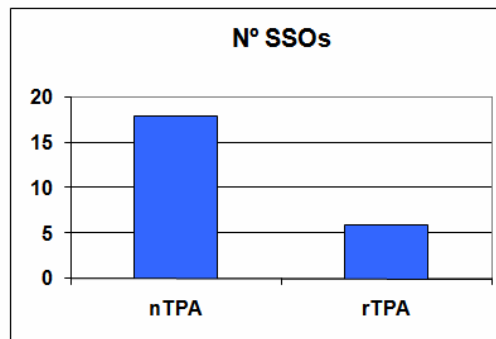
Questions

(For explanation of terms, please see Annex 1)

SECTION 1 - GENERAL

1.1 What is your regulatory regime?

| Main TPA regime | N° of SSOs | N° Countries | N° Storage facilities | Commercial Working Gas Volume [Mm ³ (n)] | Technical Withdrawal Capacity [Mm ³ (n)/day] | Technical Injection Capacity [Mm ³ (n)/day] |
|-----------------|------------|--------------|-----------------------|---|---|--|
| nTPA | 18 | 8 | 58 | 37.372 | 774 | 371 |
| rTPA | 6 | 5 | 23 | 14.986 | 350 | 168 |
| TOTAL | 24 | 13 | 81 | 52.358 | 1.124 | 539 |



Note: In case of several SSOs (more than 8), there is some storage capacity only available to the TSO or SSO (priority use).

Around 30% of total GSE respondent's commercial WGCV is offered under regulated TPA, with the rest of commercial WGCV (70%) offered under negotiated TPA regime.

1.2 Is there a common regulatory regime for all the SSOs in your country [contrary to different regulatory regimes applying to different SSOs]?

There is a common regulatory regime applicable to all the SSOs in each EU member state except for United Kingdom and The Netherlands, where rules are defined on a “case by case” basis.

1.3 Is the regulatory regime expected to change regarding CAM&CMP in the near future?

| | Answers | WGCV in Mm ³ (n) |
|---------|---------|-----------------------------|
| Answers | 24 | 61.556 |
| Members | 31 | |

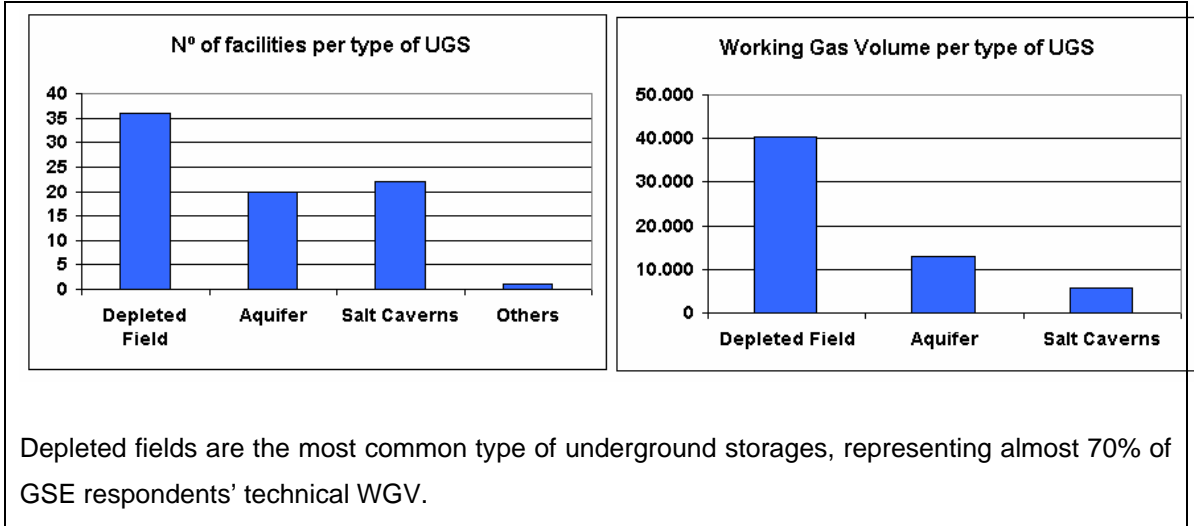
| | Yes | No |
|---------------------|-------|--------|
| N° SSOs | 4 | 20 |
| Mm ³ (n) | 7.052 | 54.504 |
| % capacity | 11% | 89% |

Expectations to CAM&CMP changing exist in the Czech Republic, Hungary and Denmark.

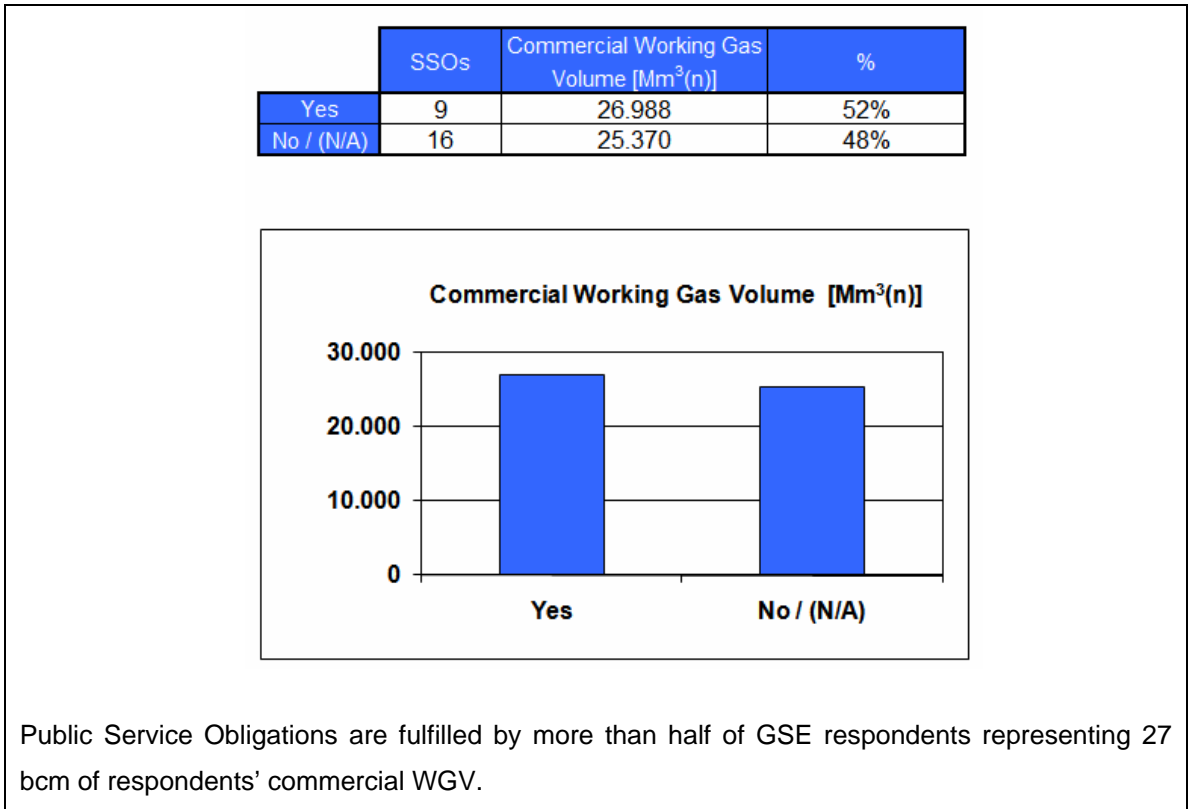
1.4 What is the type of your storage facility?

| | N° Storage facilities | Working gas Volume in [Mm ³ (n)] | Technical Withdrawal Capacity [Mm ³ /day] | Technical Injection Capacity [Mm ³ /day] |
|----------------|-----------------------|---|--|---|
| Depleted Field | 36 | 40.431 | 596 | 287 |
| Aquifer | 20 | 13.034 | 192 | 124 |
| Salt Caverns | 22 | 5.777 | 170 | 67 |
| Others | 1 | - | - | - |
| | 79 | 59.242 | 957 | 478 |

Note: Data in this table do not include a virtual storage of one SSO.



1.5 Are there any arrangements with regard to Public Service Obligation (PSO) that may affect the CAM?



1.6 Are there mandatory requirements with respect to holding of strategic stocks for your SSO?

Mandatory requirements with respect to holding of strategic stocks only apply in Hungary, Italy and Spain. In many other Member States there may be an obligation on the TSO to provide peak gas in extreme situations (e.g. period of extremely low temperatures). To fulfil such obligations, the TSO could contract with an SSO for storing and keeping available the gas required.

1.7 What is the average number of primary storage users (including own use, not including secondary market users) per storage facility or storage group?

a. less or equal to 3

b. between 4 and 10

c. more than 10

Almost one half (11) of the SSOs has between 4 and 10 primary storage users. For the other half, there is an almost even distribution of operators that have less or equal than 3 and more than 10 primary storage users (6 and 7 SSOs respectively). However, when linked to working gas volume a very different picture emerges. More than half (56%) of the working gas volume is in storages that have more than 10 primary capacity users; almost one-third (28%) of the working gas volume is in storages that have between 4 and 10 primary capacity users; and only one-sixth (16%) of the working gas volume is in storages that have less than or equal to 3 primary capacity users (negotiated capacity for 13.4% of capacity, meaning 5 SSOs).

SECTION 2 - CAPACITY ALLOCATION MECHANISMS

2.1 Who designs the Capacity Allocation Mechanisms applied by your SSO?

Well over two-thirds of SSOs design the Capacity Allocation Mechanism by themselves (while for some it is subsequently approved by the regulator), for the others it is designed by the regulator or defined by law. One SSO states that the Capacity Allocation Mechanism has been designed through an industry workshop.

2.2 If and when your SSO designs Capacity Allocation Mechanisms, does it consult with (potential) storage users?

Apart from two exceptions, all SSOs consult (potential) storage users.

2.3 What is the kind of CAM in use by your SSO for bundled capacity and the working gas volume related to each kind of CAM for bundled capacity?

The following table provides information on the use of CAM procedures for both bundled and unbundled capacities.

| type of CAM | Following the clients' customers' portfolio | First committed - first served | First come - first served | Auction | Prorata | Lottery | other |
|-------------|---|--------------------------------|---------------------------|---------|---------|---------|-------|
| Mm3(n) | 20931 | 14751 | 10257 | 3507 | 2912 | 0 | 0 |
| % | 40% | 28% | 20% | 7% | 6% | 0% | 0% |
| Nb of SSOs | 6 | 8 | 6 | 5 | 6 | 0 | 0 |

Note: Results have been rounded.

The four most widely used CAM procedures (Following the clients' customers' portfolio, First committed/come - first served and Auction) are used for 90% of the total storage capacity.

2.4 Could you specify for the bundled capacity the relation between storage volume and withdrawal/injection capacity (e.g. SBUs)?

The mean withdrawal duration is 47 days while the mean injection duration is 99 days.

2.5 What is the kind of CAM in use by your SSO for unbundled capacity and the working gas volume, withdrawal rate and injection rate related to each kind of CAM for unbundled capacity?

See point 2.3.

14 SSOs are offering unbundled capacities, representing 58% of the answers.

2.6 What is the length of the contracts?

| | one year | > one year | < one year |
|------------|----------|------------|------------|
| Mm3(n) | 22540 | 20452 | 311 |
| % / answer | 52% | 47% | 1% |

52% of the total commercial capacity is contracted under annual contracts.

2.7 What kind of priority mechanisms are in use, or have you used in capacity allocation, if any?
For example, do long-term contracts get priority over short-term contracts? Or do larger contracted volumes get priority over smaller volumes?

| | Answers | Members | Answers |
|---------|---------|---------|---------|
| Answers | 24 | | 77% |
| Members | 31 | | |

| | No. | % | Remarks |
|-----|-----|-----|--|
| Yes | 2 | 8 | 1 SSO: Customers with firm rights get interruptibles |
| No | 22 | 92 | |
| N/A | N/A | N/A | |

Conclusion: Very little use of priority mechanisms

2.8 Does your SSO cooperate with other SSOs or TSOs in order to provide an efficient capacity allocation?

| | Yes | No |
|--------------|-------|------|
| Answers | 19 | 5 |
| % / answer | 79% | 21% |
| Mm3(n) | 43295 | 9063 |
| % / Capacity | 83% | 17% |

A large majority of GSE members cooperates with other SSOs or TSOs in order to provide an efficient capacity allocation.

2.9 Do you use Open Seasons or Open Subscription Periods for storage for?

| | existing capacities | new capacities |
|------------|---------------------|----------------|
| yes | 6 | 8 |
| % / answer | 25% | 33% |

Less than one-third of the responding SSOs are using either OS or OSP for storage capacities. Among the 6 and 8 SSOs using OS or OSP for respectively existing capacities and new capacities, 4 are using OSP only.

2.10 What is the CAM for planned storages if already decided?

| | | |
|----------------|----|----------------|
| | | Answers |
| Answers | 14 | 45% |
| Members | 31 | |

| | % | Remarks |
|------------------|-----|--------------------------------------|
| FCommFS | 36 | |
| FComeFS | 21 | |
| Following | 21 | |
| Auction | 36 | |
| Pro rata | 7 | |
| Lottery | 0 | |
| Other | 7 | 1 SSO: FCFS combined with ranked PSO |
| N/A | N/A | See remark below |

Note: 10 respondents found this point not applicable as the CAM has not been decided yet, or planning is centralized by the government under proposals by TSO.

Conclusion: First Committed First Served and auctions are the preferred methods for planned storages, with "Following the client's portfolio" ranking lower. The trend is towards a more diverse use of CAM, especially as regards first-rule and auction (Note: Data based on number of SSOs and not WGV).

SECTION 3 – CONGESTION MANAGEMENT METHODS

3.1 Who designs the Congestion Management Methods applied by your SSO?

| | | Answers |
|---------|----|---------|
| Answers | 24 | 77% |
| Members | 31 | |

| | % | Remarks |
|-----------|----|---|
| SSO | 75 | |
| Regulator | 33 | |
| Other | 13 | 1 SSO: predefined rules; 2 SSOs: Ministry of energy of MS |

Conclusion: Majority of SSOs designs CMP by themselves, some in direct cooperation with the NRA.

3.2 If and when your SSO designs Congestion Management Procedures, does it consult with (potential) storage users?

| | | Answers |
|---------|----|---------|
| Answers | 20 | 65% |
| Members | 31 | |

| | % | Remarks |
|-----|-----|-----------------------------------|
| Yes | 90 | |
| No | 10 | |
| N/A | N/A | 3 SSOs: N/A, 1 SSO did not answer |

Conclusion: Large majority of SSOs consults storage users when designing CMP.

3.3 What kind of CMP do you use in case of contractual congestion?

| | | Answers |
|---------|----|---------|
| Answers | 22 | 71% |
| Members | 31 | |

| | % | Remarks |
|---------------|-----|---|
| FComeFS | 14 | |
| FCommFS | 18 | |
| Following | 14 | |
| Pro rata | 50 | |
| Auction | 36 | |
| Sec.market | 46 | |
| Hub | 9 | |
| UIOLI | 27 | |
| Interruptible | 36 | |
| Other | 5 | 1 SSO: Capacity release examination in case of storage access request |
| N/A | N/A | 2 SSOs: N/A |

Conclusion: Wide use of different CMP mechanisms in case of contractual congestion. Especially pro-rata allocation, secondary markets, auction, interruptible products and to some degree UIOLI are the preferred mechanisms. Answers do not represent a percentage of capacity. SSOs use more than one method.

3.4 What kind of CMP do you use in addition to the above list in case of physical congestion?

Example of answers:

- If reduction of interruptible contracts is not sufficient, pro-rata allocation is applied to firm capacity
- Mutual assistance between storage groups
- Interruptible transport by TSO
- Application of short- and long-term planning

Conclusion: Cutting down interruptible services is the most widely used additional CMP in case of physical congestion.

3.5 Which type of UIOLI is applied by your SSO?

| | Answers | WGVI in Mm ³ (n) |
|---------|---------|-----------------------------|
| Answers | 24 | 61.556 |
| Members | 31 | |

| | Backward looking | Forward looking | Lose it or trade it | Interruptible | Not applied |
|---------------------|------------------|-----------------|---------------------|---------------|-------------|
| N° SSOs | 5 | 8 | 0 | 4 | 7 |
| Mm ³ (n) | 12.701 | 22.222 | - | 28.391 | 5.256 |
| % capacity | 22% | 39% | 0% | 49% | 7% |

Among the SSOs not applying UIOLI (7% of total capacity), only one company (representing 0.8% of total capacity) has contractual congestion.

3.6 Regarding UIOLI, please specify in the blank box below:

- Who decides on the non-use?
- Who decides on the notice period?
- At which timescales do you operate UIOLI (daily, weekly, monthly or yearly)?
- Is the loss of capacity permanent or not?

Conclusion: Not many answers. The few answers say SSO decides on the non-use and capacity is not lost permanently.

3.7 What are the arrangements with regard to the secondary market for capacity?

| | | | |
|---------|----|---------|---------------------------|
| | | Answers | WGV in Mm ³ n) |
| Answers | 24 | 24 | 61.556 |
| Members | 31 | | |

| | | | | |
|---------------------|---------------------|--------|----------------|---------------|
| | Electronic Platform | OTC | Bulletin board | Nothing/Other |
| N° SSOs | 11 | 8 | 15 | 3 |
| Mm ³ (n) | 41.726 | 32.857 | 43.733 | 487 |
| % capacity | 72% | 56% | 73% | 1% |

SSOs provide many arrangements for secondary market trading consistently with a situation of contractual congestion for capacity. Only three operators (1% of capacity) do not make available secondary market tools.

3.8 Is your secondary market for capacity a regional hub (covering several SSOs)?

| | | |
|---------|----|---------|
| | | Answers |
| Answers | 24 | 77% |
| Members | 31 | |

| | | | |
|-----|-----|-----|---------|
| | No. | % | Remarks |
| Yes | 4 | 17 | |
| No | 20 | 83 | |
| N/A | | N/A | |

Conclusion: Store-x remains the only regional hub functioning as a secondary market for storage capacity.

3.9 What is the percentage of contracted working gas volume relative to the total working gas volume?

| Answers | 24 | Answers | WGCV in Mm ³ (n) |
|---------|----|---------|-----------------------------|
| Members | 31 | 24 | 61.556 |

| | Current gas year | Next gas year |
|---------------------|------------------|---------------|
| Mm ³ (n) | 52.194 | 25.587 |
| % capacity | 85% | 42% |

The above percentages refer to contracted capacity (85% for the current gas year means that 15% is not fully contracted).

A percentage of capacity contracted fully for the following gas year refers only to contracts longer than 1 year.

3.10 How often have you experienced physical congestion last gas year?

| Answers | 24 | Answers | WGCV in Mm ³ (n) |
|---------|----|---------|-----------------------------|
| Members | 31 | 24 | 61.556 |

| | 0% of the time | less than 10% | between 10% and 50% | more than 50% |
|---------------------|----------------|---------------|---------------------|---------------|
| N° SSOs | 17 | 4 | 2 | 1 |
| Mm ³ (n) | 46.798 | 8.998 | 3.300 | 2.366 |
| % capacity | 76% | 15% | 5% | 4% |

3.11 Do you think you will experience physical congestion in the current gas year?

| Answers | 24 | Answers | WGCV in Mm ³ (n) |
|---------|----|---------|-----------------------------|
| Members | 31 | 24 | 61.556 |

| | Yes | No |
|---------------------|--------|--------|
| N° SSOs | 7 | 17 |
| Mm ³ (n) | 12.311 | 49.245 |
| % capacity | 20% | 80% |

3.12 How often have you experienced contractual congestion last gas year?

| | | | |
|---------|----|---------|-----------------------------|
| | | Answers | WGCV in Mm ³ (n) |
| Answers | 24 | 24 | 61.556 |
| Members | 31 | | |

| | | | | |
|---------------------|----------------|---------------|---------------------|---------------|
| | 0% of the time | less than 10% | between 10% and 50% | more than 50% |
| N° SSOs | 11 | 5 | 1 | 5 |
| Mm ³ (n) | 25.814 | 14.078 | 2.120 | 19.150 |
| % capacity | 42% | 23% | 3% | 31% |

Contractual congestion existed for 58% of capacity in the last gas year, while physical congestion for 24% of capacity.

3.13 Do you think you will experience contractual congestion in the current gas year?

| | | | |
|---------|----|---------|-----------------------------|
| | | Answers | WGCV in Mm ³ (n) |
| Answers | 24 | 24 | 61.556 |
| Members | 31 | | |

| | | |
|---------------------|--------|--------|
| | Yes | No |
| N° SSOs | 12 | 10 |
| Mm ³ (n) | 33.856 | 27.700 |
| % capacity | 55% | 45% |

55% of contractual congestion but 20% of physical congestion (see above).

3.14 Does your SSO publish information on the duration of contractual congestion periods?

Publish Info on Contractual Congestion Periods?

| | SSOs | % SSOs | Commercial Working Gas Volume [Mm3(n)] | % Capacity |
|-----------|------|--------|--|------------|
| Yes | 16 | 64% | 45.591 | 88% |
| No or N/A | 9 | 36% | 6.367 | 12% |

For the current gas year?

| | SSOs | % SSOs | Commercial Working Gas Volume [Mm3(n)] | % Capacity |
|-----------|------|--------|--|------------|
| Yes | 11 | 44% | 37.584 | 72% |
| No or N/A | 14 | 56% | 14.774 | 28% |

Until Period Expected to Terminate?

| | SSOs | % SSOs | Commercial Working Gas Volume [Mm3(n)] | % Capacity |
|-----------|------|--------|--|------------|
| Yes | 7 | 28% | 19.924 | 38% |
| No or N/A | 18 | 72% | 32.434 | 62% |

Conclusion: High level of transparency on contractual congestion for the current gas year (please note that many SSOs only offers one-year or less duration contracts)

3.15 What are the anti-hoarding measures in use by your SSO?

Virtually all SSOs apply anti-hoarding measures, most of them either UIOLI or facilitation of a secondary market for storage capacity, or a combination of these measures. Some SSOs apply a limitation on the maximum allowed storage capacity to be contracted. No respondent have indicated to use limitations on the capacity dedicated for long term contracts.

Split according to Working Gas Volume, it appears that the following measures: UIOLI, limitation on the maximum allowed storage capacity to be contracted (e.g. restriction for incumbent to hold maximum percentage of total capacity, or restrictions on users in general), secondary market as well as other measures each apply to roughly half of the total working volume held by all SSOs (note that some SSOs apply a combination of anti-hoarding measures, mainly of UIOLI and secondary market). Only some 3% of working gas volume is either covered by different anti-hoarding, or no anti-hoarding mechanisms.

3.16 Does your SSO cooperate with other SSOs or TSOs in order to facilitate the market when contractual or physical congestion occurs?

| | Yes | No | not decided yet |
|--------------|-------|-------|-----------------|
| Answers | 14 | 9 | 1 |
| % / answer | 58% | 38% | 4% |
| Mm3(n) | 27695 | 24569 | 94 |
| % / Capacity | 53% | 47% | 0,2% |

58% of GSE members cooperate with other SSOs or TSOs in order to facilitate market when contractual or physical congestion occurs.

3.17 Please specify in the blank box below how your SSO ensures an objective, transparent and non-discriminatory treatment regarding CAM&CMP?

- Procedures set out in undertakings, sales reported to NRA, publication of terms, available capacities, non-discriminatory allocation method, UIOLI, notification to regulator
- Business code approved by regulator, all available capacities, auction procedure published
- All rules published and include in storage code approved by NRA, services offered to all users at same conditions
- Consultations with customers, detailed and well defined rules, publication of prices and capacity
- CAM defined partly in law and details approved by NRA
- Standard contracts, same conditions to all clients, publication of available capacity
- (list of prescriptions to following the client, auctions, pro-rata allocation, UIOLI, secondary market)
- Rules strict, clear and published and the same to all clients
- Beforehand publication, no special treatment, immediate info on maintenance periods, simultaneous info in case of additional capacity, publication of sold volumes
- Abiding with rules that have been approved by NRA
- Rules designed by NRA/SSO, consulted with users, binding in all cases and published
- Needs to be further developed as it has not been an issue up to now
- Publish allocation capacity beginning each year, each month report on secondary market, capacity transfer and concentration ratios
- Publication of *reglement d'allocation*, same level of info to all shippers
- Publish all capacities available, terms and conditions, prices, allocation rules, same conditions to all
- SSO has general terms and conditions for storage access
- SSO published contracts on website
- CAM&CMP published in the internet
- Approval by NRA, results published by SSO

Conclusion: SSOs themselves put great emphasis on consultation or approval of storage and business codes by the NRA, publication of terms and conditions including CAM&CMP and equal treatment of all customers.

SECTION 4 – FURTHER COMMENTS

4.1 Please provide any further comments, either general or specific.

Some respondents pointed out that from an SSO's point of view it is important to pay attention to all the anti hoarding discussions. It seems impossible to verify whether hoarding occurs. If a customer does not use capacity, this can be caused either by the weather conditions or by a specific market situation. Moreover, the customer is interested in booking storage capacity for he is uncertain of the effect of all these possible influences. Storage capacity is needed in order to minimize the customers' risks. And, as a SSO cannot penalise his customer for external influences, the SSO is not in a position to define whether hoarding is given or not.