European Regulators Group for Electricity & Gas

2008 Status Review: Capacity Allocation Mechanisms and Congestion Management Procedures for Storage

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1 Executive Summary

Capacity allocation and congestion management are important issues in the European gas market as most European storage facilities are fully booked. The allocation of any residual capacity and the management of congestion, therefore, play a central role in the development of a competitive EU gas market. Poor transparency in access conditions is a significant issue for a large number of storage users and may be a barrier to new market entry. In some cases, the absence of effective and non-discriminatory procedures for capacity allocation and congestion management and the modest development of secondary markets allow for capacity hoarding.

The ERGEG Guidelines of Good Practice for Storage System Operators (GGP-SSO) were published in March 2005. Since then, ERGEG has undertaken two monitoring exercises on storage operators' compliance with the GGP-SSO. The findings from these exercises showed that most storage facilities are congested and that competition between SSOs is limited. The DG Competition Sector Inquiry Report (the Sector Inquiry) also indicated that in a number of cases, storage facilities will be congested for many years.

Hence, ERGEG has conducted a Status Review of existing Capacity Allocation Mechanisms (CAM) and Congestion Management Procedures (CMP), using questionnaires completed by Storage System Operators (SSOs), National Regulatory Authorities (NRAs) and actual and potential storage customers. The Annexes set out the questions as well as the detailed results and comments received to the questionnaires.

88% of the NRAs from Member States with storage facilities responded to the questionnaire (14 / 16 NRAs). The response rate for SSOs was 67% and the response rate from storage system users was 18%. The results of the survey indicate that there are currently a wide range of different approaches to allocating capacity and managing congestion in Europe.

Where "first come first served" (FCFS) is the capacity allocation mechanism applied, a large proportion of storage facilities are fully booked (no capacity available for third parties) and the proportion of storage booked by affiliated shippers is higher than in storage facilities using other allocation mechanisms. In the absence of sufficient regulatory oversight, ERGEG concludes that FCFS does not appear to result in a non-discriminatory and fair allocation of capacity. There are also a number of countries with no legal requirement for storage operators to have effective capacity allocation (25%) and congestion management procedures (75%). The report also finds that effective congestion management procedures and secondary markets are not widely used.

This is a major concern as most EU storage facilities are fully booked and are expected to be congested for many years. Consequently the regulators have committed to developing ERGEG Guidelines of Good Practice (GGPs) on Capacity Allocation Mechanisms (CAM) and Congestion Management Procedures (CMP) for gas storage in 2009.

2 Introduction

2.1 Background

Capacity allocation and congestion management are important issues in the European gas market as most European storage facilities are fully booked. The allocation of any residual capacity and the management of congestion, therefore, play a central role in the development of a competitive EU gas market. Poor transparency in access conditions is a significant issue for a large number of storage users and may be a barrier to new market entry. In some cases, the absence of effective and non-discriminatory procedures for capacity allocation and congestion management and the modest development of secondary markets allow for capacity hoarding.

The ERGEG Guidelines of Good Practice for Storage System Operators (GGP-SSO) were approved at the Madrid Joint Working Group (JWG) in March 2005. Since then, ERGEG has undertaken two monitoring exercises on storage operators' compliance with the GGP-SSO. The findings from these exercises showed that most storage facilities are congested and that competition between SSOs is limited. The DG Competition Sector Inquiry Report (the Sector Inquiry) also indicated that in a number of cases, storage facilities will be congested for many years.

In its third energy liberalisation package (3rd Package), the European Commission took up many of ERGEG's proposals to improve access to storage, which calls for measures to increase transparency, to widen the range of services available to users and to improve the way that capacity is allocated and reallocated. However, in the 3rd Package, the EC only lays down basic principles; detailed obligations, including those having to do with capacity allocation mechanisms and congestion management will be developed via comitology. ERGEG considers that it is necessary to begin working on such obligations as soon as possible, given the prevalence of storage facilities in the EU that are congested on a long-term basis (as noted in the Sector Inquiry).

ERGEG has therefore sought to provide an overview of the current situation in different EU member states and to explore solutions for better third party access (TPA) to storage by assessing various Capacity Allocation Mechanisms (CAMs) and Congestion Management Procedures (CMPs). This status review provides an overview of the current situation in Member States and should be the basis for the assessment of the CAMs and CMPs used within the Member States in the near future.

2.2 Method of approach

The status review is based on an ERGEG survey of CAM and CMP, using questionnaires completed by Storage System Operators (SSOs), National Regulatory Authorities (NRAs) and actual and potential storage customers. The questionnaires addressed the current methods for developing, designing, actual use and effects of the systems for capacity allocation, congestion management and security of supply, respectively. Annexes 1, 2 and 3 set out the questions included in the various questionnaires, as well as the detailed results and comments received.

88% of the NRAs from Member States with storage facilities responded to the questionnaire (14 / 16 NRAs).

The questionnaires distributed to SSOs were sent to 52 SSOs addresses that were provided by the NRAs. The response rate for SSOs was 67%. 29 of the responses could be analysed; 18 were received from GSE members, corresponding to a weighted gas volume (WGV) of 46.8 bcm and 11 from non-GSE members, mostly German SSOs, with WGV 4.1 bcm. 13 German SSOs did not respond, including 1 GSE member. In total, 65% of the WGV in

Germany was covered by the SSO responses. The SSOs that responded account for approximately 50 bcm WGV; 62% of the WGV of the EU Member States.

The addresses of (potential) storage customers were obtained from NRAs. In the case of distribution companies and industrial customers, those of traders and wholesalers were taken from the publication of registered traders on European hubs and exchanges, e.g., EEX[1], ICE[2], TTF[3], CEGH[4]. Questionnaires were sent by email to 429 addresses of 186 companies. 33 responses could be analysed, an 18% response rate. There was a low-level of response from industrial customers and distribution companies. More than a half of those that did respond have contracted between 100 and 2000 mcm WGV. Approximately 12% of the respondents have more than 2,000 mcm WGV contracted.

Stakeholder groups (GSE[5], EFET[6], Eurogas) were also consulted. GSE launched an internal survey in order to obtain an overview of the currently applied CAM and CMP mechanisms throughout the EU and to offer some practical guidance on these mechanisms. The results of this survey are summarized in a GSE Position Paper, which was published in June 2008.[7] In addition, ERGEG representatives held two meetings with the stakeholders to discuss the results of the questionnaire as well as the GSE Position Paper.

In this status review, the results of the GSE survey as well as the stakeholder meetings are integrated. The analysis is primarily based on the SSO responses to the questionnaires.

[1] European Energy Exchange (EEX)

[2] Intercontinental Exchange (ICE)

[3] Title Transfer Facility (TTF)

[4] Central European Gas Hub (CEGH)

[5] Gas Storage Europe (GSE)

[6] European Federation of Energy Traders (EFET)

[7] Published on the GSE Homepage: http://www.gie.eu.com/publications/indexframe_GSE.html

3 Basic conditions for capacity allocation mechanisms and congestion management procedures for storage

3.1 Guidelines of Good Practice for Storage System Operators (GGP-SSO)

In 2005, ERGEG developed the Guidelines of Good Practice for Storage System Operators (GGP-SSO) [8], in line with the Gas Directive as a first step towards improving the conditions for storage access conditions and to ensure full and harmonized implementation of Article 19 among Member States by giving a minimum set of rules. The purpose of these GGP is to ensure that Storage System Operators (SSOs) provide the services needed by storage users on a fair and non-discriminatory basis. The GGP-SSOs sets out systems and processes to be implemented by the SSOs to facilitate the sustainable development of competition in gas supply, taking into account technical constraints and the economically efficient use of the storage infrastructure. The GGP-SSO are not legally binding.

Within the GGP-SSO, the roles and responsibilities for SSOs relating to capacity allocation mechanisms and congestion management procedures were specified as follows:

"…1.2 SSOs shall inter alia:

c. aim at accommodating market demand on a non-discriminatory basis, without imposing barriers to customer supply and to trade, whilst granting efficient and competitive access taking into account § 3.4 and 4.2;

d. establish rules on the use of capacity aimed at facilitating competitive and efficient use of that storage facility, in particular to discourage storage capacity hoarding. Maximise the use of available capacity and offer unused capacity at least on an interruptible basis, and services according to § 3.3;

e. treat commercial information confidentially, especially with regard to any affiliated company, in order to avoid any discrimination between storage users;… "

Additionally there are also specified Guidelines for Storage capacity allocation and congestion management setting the minimum rules for the development

"…4.1. Storage capacity allocation mechanisms 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 are incumbent upon the SSO;*

[8] Guidelines for Good TPA Practice for Storage System Operators (GGP-SSO), 23 March 2005 (E04-PC-01-14); the report can be accessed via the following link:
http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Guidelines%20of%20Good%20Practice/Gas/E04-PC-01-14_GGPSSO_2005-03-23_FINAL%20-%20March%202005.pdf

c. *not create undue barriers to market entry and not prevent market participants, including new market entrants and companies with a 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.*

4.2. In case of congestion:

a. *non-discriminatory, market-based solutions shall be applied by the SSO or by the relevant national regulatory authority, where appropriate;*

b. *alternative solutions such as pro-rata mechanisms may be considered if they ensure equivalence in terms of non-discriminatory and competitive access;*

c. *the SSO or the relevant national regulatory authority shall appropriately balance the portion of storage capacity contracted under long-term contracts and short term contracts, with the aim of promoting effective competition.*

4.3. In no circumstances should the provisions of § 4.1 and 4.2 prevent customers from changing suppliers at any time of the year.

4.4. The SSO shall actively endeavour to discourage hoarding and facilitate re-utilisation and trade of storage capacity by all reasonable means, including at least the offer on an interruptible basis of all unused capacity (e.g. day-ahead release of non-nominated injectability and deliverability).

4.5. If, in spite of all measures aimed at preventing capacity hoarding, capacity remains unused and significant and prolonged contractual congestion occurs, the relevant national regulatory authority may according to national law introduce measures to ensure the efficient functioning of the market, including the efficient use of storage capacity…"

The GGP-SSO do not prescribe which capacity allocation mechanisms or congestion management procedures should be used to fulfil the recommended practices.

3.2 Monitoring of the GGP-SSO in 2005 and 2006

Since the publication of the GGP-SSO, ERGEG has undertaken two monitoring exercises on the implementation of the GGP SSO by the storage operators[9].

The results from **the initial monitoring exercise in 2005** were disappointing. In particular, there were some key areas where the level of implementation was not sufficient. Some basic requirements of the Gas Directive, which were reflected in the GGP-SSO, had not been implemented by some SSOs. The majority of SSOs had not fully implemented the requirements relating to transparency and secondary markets and in some countries, it was unclear how much storage capacity was excluded from TPA. ERGEG's monitoring work also

[9] The 2005 (E05-STO-06-03) and 2006 (E06-GFG-20-03) Monitoring Reports on the Implementation of the GGP SSO can be found via the following link:: http://www.energy-http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Gas/2006

showed that further investigation was needed to assess compliance against some specific requirements of the GGP-SSO, possibly at national level (i.e., those on confidentiality, and congestion management and capacity allocation mechanisms).

ERGEG undertook a **second monitoring exercise in 2006,** assessing the effectiveness of the GGP-SSO and the functioning of the market for storage services. The initial results (2006 Interim Report) were presented at the 11th Madrid Forum (May 2006). More than one year after the adoption of the GGP-SSO compliance remained unsatisfactory in key areas, such as transparency, equal treatment of storage users (including confidentiality requirements) and congestion management (including secondary markets). Access to storage remained limited.

The monitoring results, which had been supported by storage users, showed that access to storage is generally not satisfactory across Europe. This has significant implications for the operation of the EU gas storage market: poor transparency in access conditions is a major issue for storage users and may result in a barrier to new market entry. The lack of transparency in access conditions may strengthen dominant positions and hampers market development. Confidentiality firewalls are needed to limit and remove information asymmetries and prevent market failures. Where no separation requirements are in place for information flows between storage operators and affiliates, other market participants can be put at a significant disadvantage;

The 2006 monitoring report showed that out of 20 SSOs, 16 SSOs representing 84% of total capacity were congested or almost congested (meaning that no capacity or no more than 5% of technical capacity was available). The absence of effective and non-discriminatory procedures for congestion management and the modest development of secondary markets allows capacity hoarding to occur and are barriers to entry in the gas storage market.

4 Results of ERGEG Questionnaires

In January 2008, ERGEG published its annual Work Programme, which focused on continuing work on the development of the European energy regulatory framework; which included further development of the Guidelines for Good Practice on Capacity Allocation Mechanisms (CAM) and Congestion Management Procedures (CMP). ERGEG considered it was necessary to survey the different CAM and CMP utilised within Europe and provide an assessment of these , prior to developing guidelines.

The analysis of the applied CAM and CMP was primarily based upon the responses received from the SSOs, which were complemented and substantiated by the NRAs' responses. As the response rate of the storage users was poor the results of their questionnaires should be interpreted with caution; as a next step, further work should be undertaken to gain a clearer understanding of the storage users´ view when assessing the different CAM and CMP.

4.1 Regulatory framework for storage access in the ERGEG member states

Member States are free to choose between implementing regulated third party access regimes (rTPA) and negotiated third party access regimes (nTPA). This choice is reflected in the different regimes for storage access that are in place in the ERGEG Member States. RTPA is implemented in Belgium, Hungary, Italy and Spain, which accounts for about 40% of the surveyed SSOs, (rTPA is also implemented in Portugal, Latvia and Turkey, however, SSOs from these Member States did not participate in the survey). Bulgaria, Poland and Romania have no TPA to date. The other member states have implemented nTPA.

Table 1: Regulatory regimes for gas storage access in ERGEG member states

rTPA	Belgium, Italy, Hungary, Portugal, Spain, Turkey, Latvia
nTPA	Austria, Czech Republic, Denmark, France, Germany, Netherlands, Slovak Republic, UK
Other type of regulation	e.g. :Germany: ex-post misuse regulation
Exclusion from TPA	UK (under Gas Act 1986) Germany: Storage capacity for production purposes and TSOs/DSOs duties Austria: Storage capacity for production purposes Denmark: Storage capacity needed for TSO requirements under its security of supply obligations Turkey: PSO
No TPA:	Bulgaria, Croatia, Poland, Romania
No storage capacity	Lithuania, Estonia, Finland, Greece, Ireland, Latvia, Luxembourg, Malta, Sweden, Slovenia, Cyprus

14 NRAs responded to in the questionnaire: Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Greece, Italy, Portugal, Slovak Republic, Spain, Turkey and United Kingdom. Estonia has no storage capacity.

The NRAs reported that there are no differences in licensing process for the development of storage sites between incumbents and newcomers in the storage markets.

To date, no exemptions have been granted in respect of Art. 22 of Directive 2003/55/EC, which allows Member States to grant exemptions to third party access requirements for major new infrastructure developments, which includes new storage facilities.

NRA opinions given on granting exemptions are reserved:

- **CNE (Spain):** "There are other ways to promote investments on storage, i.e., when obligations for shippers/traders regarding SoS are regulatory established. In this case the use of the storage is also guaranteed, and therefore, the investment recovery."
- **BNetzA (Germany):** "Discussions with market participants in several cases have shown that the risks in storage investments can generally be adequately met under the regulated regime
- **CREG (Belgium):** "There is an alternative to exemption: Special treatment without exemption; enhanced reward of invested capitals, long term tariff regulation."

4.2 Availability of storage capacity

The available capacity of the responding SSOs in 2007 is set out in Table 2. The table excludes PGNiG (Poland), as there is no TPA. The results show that only a small amount of the surveyed capacity was available in 2007.

Table 2: Available capacity in 2007

	Working gas volume mcm	Withdrawal rate cm/h	Injection rate cm/h
Technical capacity	49.718	34.056.094	18.356.948
Capacity for TPA	49.245	33.323.604	18.154.864
Contracted capacity	49.241	33.202.985	18.138.733
Available capacity	0,01%	0,36%	0,09%

Only 4 SSOs have reported available capacity in 2008; in 2009, 11 SSOs have reported available capacity.

It is important that information relating to available capacity is available to all existing and potential storage users. Although there has been an improvement of transparency at a general level[10], detailed information about the situation is still lacking in key areas including:

→ the next date that capacity will be available; and

→ whether contracted capacity is fully utilised

Public Service Obligations

Of the responding NRAs, 6 stated that they have Public Service Obligations (PSOs): Belgium, Denmark, Italy, Portugal, Spain and Turkey. For example, due to the lack of storage

[10] See GSE, http://www.gie.eu.com/maps_data/inventory.html

capacity in Belgium, the entire capacity has been reserved for public distribution purposes. In France there are specific requirements for suppliers with a supply licence for clients of general interest (mission d'intérêt général, MIG), e.g. schools, hospitals. The storage rights for MIG licence holders take precedence over other licence holders. In this way, the availability of storage capacity is restricted for other services.

Long term contracts

On average, 54% of the storage capacity of the 24 responding SSOs is locked in contracts with a duration of more than one year and 34% of the storage capacity is contracted for a duration of more than five years. This accounts for 30% (more than one year) and 24% (more than five years) of booked WGV.

The survey has shown that applying different CAM resulted in differences in the long-term contracted WGV. The analysis of SSOs applying FCFS shows that 68% of the contracted WGV booked by long term contracts (over 5 years); compared with almost 0% when applying "capacity goes with the customer" (CGWC).

Capacity booked by affiliates

On average, SSOs have about 7 storage users, of which on average at least 1 user is an affiliated company. 54% of the WGV of the 26 responding SSOs is booked by affiliates.

The survey has shown that applying different allocation mechanisms resulted in different capacity allocations to users. The analysis of SSOs applying FCFS results in 81% of the contracted WGV is booked by affiliates. Applying CGWC, 47% of the capacity is booked by affiliates.

4.3 Structure of storage customers

In comparison with the 2006 Monitoring Report, the number of storage users increased for a few storage operators (Stogit, GDF, OMV and RAG). In these countries, capacity allocation follows the CGCW mechanism or storage capacity was expanded. A slight decrease of the number of storage customers (NAM, DONG) was also reported. This shows that there is no simple correlation possible between the number of storage customers and the facilitation of competition. Although there are some cases where the shares of affiliates decreased, in approximately 50% of the SSOs, more than 75% of the capacity is booked by the affiliates.

In storage markets with nTPA, the first come first served mechanism for capacity allocation is widely used, especially in Germany and Austria. However, only 7 out of 29 responding SSOs are independent from market agents. On average 54% of the capacity is booked by affiliates. This figure is higher when applying FCFS: The storage capacity (WGV) of the 12 responding SSOs are 81% booked out by affiliates. Out of the responding 12 SSOs, 5 are nearly or fully booked out by affiliates.

4.4 Applied CAM

Table 3: Applied CAM

CAM	Number SSOs	corresponding wgv	Share in total wgv
FCFS	14	15.889	31%
CGWC	6	26.413	51%
Auction/pro rata	2	979	2%
Auction	2	3.636	7%
Pro rata	2	2.471	5%
No TPA	3	1.990	4%
Total	29	51.378	

Most SSOs (14) apply first come/committed first served (table 1), corresponding to 31% of the surveyed WGV. 6 SSOs implemented capacity goes with the customer corresponding to 51% of the surveyed WGV. Auction and pro-rata, used separately or in combination are applied by in total 6 SSOs.

Applying different CAM the SSOs allocated about 44 bcm in 2007. About 26 bcm were allocated using CGWC and about 11.8 bcm were allocated using FCFS. 37% of the requests were refused applying FCFS, in comparison with 0% of the requests refused where CGWC and pro-rata were the applied allocation mechanisms.

The results of the questionnaires show that a majority of storage users (46%) chose FCFS as their preferred CAM, followed by auctions. However, looking at the average ranking that storage users gave to each CAM, auctions (with open subscription period) are the most preferred mechanism, followed by FCFS.

Applying First Come First Served (FCFS)

FCFS is most popular in Germany and Austria. For FCFS to be non-discriminatory information on the next date of available capacity and the booking period for this capacity has to be provided to all existing and potential storage users at the same time.

SSOs did not provide information on the detailed procedure for FCFS. In response to the question “How do you assure that the capacity is allocated in a non-discriminatory and transparent way?” only a limited number of SSOs applying FCFS provided any feedback on parts of the process:

- RAG: “*publication on internet (www.rohoel.at) and according to the open subscription and first come first served principles”*
- OMV Gas: “*publication of capacities (technical cap., available cap. Committed cap. Utilised cap. Utilisation rate) for the future and the past via web based IT-tool (OCB) in realtime, strict internal processes and rules, all contracts are submitted to E-Control.”*
- BEB: “*information of available capacity is given to the market in the same way”*
- Bayerngas GmbH; “*Sale via independent internet platform store-x on first committed first served basis”*

- Wingas GmbH: "*documentation of incoming requests with time stamp"*

Applying Capacity Goes with the Customer (CGWC)

CGWC is applied in Belgium, France and Italy as follows:

- **Belgium**
  Fluxys: "Storage services are allocated in priority to shippers who supply gas distribution, pro-rata their market share as of 4 January of each year; a reallocation is carried out in August based on the market share on 1 July."

- **France**
  GDF: "Pursuant to the French law 2003-8 of January 3, 2003, modified and completed by the law 2004-803 of August 9, 2004, the decree n° 2006-1034 dated August 21, 2006 organizes access to natural gas underground storage facilities according to a seven priority order (the two first priorities are related to the domestic and special interest customers).

  The capacity allocation mechanism is based on the principle of "capacity follows the customers" (customer-based allocation). This ensures that whenever a customer switches to a new supplier, this new supplier gets the storage capacity rights related to the customer. Each storage operator operating at least two storage sites has to propose to ministry in charge of energy a project of operational rules which describes the storage rights allocation conditions.

  Regarding Gaz de France, the different steps of the allocation of storage capacity to suppliers with final customer portfolio are described in the "Règlement d'allocation des capacités de stockage", version of January 23, 2008, which is validated by the French Ministry of Energy and published on the Gaz de France Major Infrastructure Division website. The storage capacity to be allocated to suppliers with an effective final customers' portfolio are thus based on the provisions of the ministerial decree dated February 8, 2008 relative to storage profiles and unit rights. They are sold at fixed prices defined each year by the storage operator.

  Since 2007, two rounds of this capacity allocation mechanism are organized each year, in April and in November (the actual capacity allocation mechanism was developed in 2006). Article 14 of ministerial decree n° 2006-1034 dated August 21, 2006 disposes that, after satisfaction of priority needs stipulated in Article 3, excess storage capacity is made available to the market under transparent and non-discriminatory conditions (auctioned at market price).

- **Italy**
  Stogit: Allocation priority order established by NRA:

  1. Strategic: importers from non UE countries
  2. Balancing: network operator
  3. Upstream: domestic producers
  4. Modulation: "residential" customers needs (for normal and exceptional weather conditions)
  5. Modulation: other needs

  For the first three categories, capacity is allocated as requested: the amount of capacity for strategic storage that each importer must have is defined by the Ministry as well as the maximum amount of capacity that can be requested by the domestic producers; for

the "residential" ones, a capacity allocation criteria is CGWC; for "other needs" auctions should apply.

These rules also are valid for Edison Stocaggio.

Applying auctions/pro-rata

Auctions are applied by different SSOs to allocate residual storage capacity. For example, in France the limited capacity which is not allocated in proportion to the suppliers´ portofolio is allocated through auction. 2 SSOs provided information on the design of the auction:

- **Energienet DK:** *2008: Multi-round ascending clock auction + pro-rata reduction. TSO has priority to storage in order to meet its legal obligations in terms of security of supply.*
- **Scottish and Southern Energy:** *Standard Bundled Units of storage capacity are auctioned in sealed bid, pay-as-bid-auctions. Sold SBUs are allocated to bids in descending bid price order until all capacity has been allocated.*
- Enagas:

A certain volume is booked for the SSO as residual balancing gas. The remaining volume is allocated in the following way (amounts confidential):

1. An amount of underground storage capacity equivalent to 10 days of last-year's firm sales (to all the market) will be considered as Minimum Strategic Stocks and will be allocated by the System Technical Manager to each storage user proportionally to its last-year's firm sales. ["Following the clients' customers' portfolio" + "Pro-rata"]
2. An amount of underground storage capacity equivalent to 10 days of last year's total sales (to all the market) which will be considered as Operational Gas, and will be allocated by the System Technical Manager to each storage user proportionally to its last-year's total sales. ["Following the clients' customers' portfolio" + "Pro-rata"]
3. An amount of underground storage capacity equivalent to 30 days of last-year's total sales to customers connected to pipelines with a pressure equal or under 4 bar, will be allocated by the System Technical Manager to each storage user proportionally to last-year's total sales to customers supplied with a pressure equal or under 4 bar. ["Following the clients' customers' portfolio" + "Pro-rata"]
4. *A certain amount is allocated via an auction.*

Development of CAM

In developing the CAM, the majority of SSOs reported that they involved storage customers in the process. In 80% of cases, the main customers (from 42% up to 100% of the booked WGV) are affiliated companies. In the questionnaires to the SSOs it was not asked whether **all** customers were consulted in developing the CAM. Only 39% of the storage users and 36% of the NRAs answered that they are involved in the development of CAM.

In some cases, the degree to which storage users are able to influence the process of developing the CAM depends on whether they are affiliated to the storage operator. 73% of the NRAs answered that there are special legal requirements for capacity allocation mechanisms and procedures, accordingly more than a quarter of the respondents remarked that there are no legal requirements for CAM. Where there is no legal requirement for CAM, the potential to influence the development is limited.

Complaints on CAM

NRAs of 6 member states reported that there were complaints on the applied CAM:

- Austria: "One SSO allocated storage capacity in an intransparent way. The SSO changed the CAM after taking legal action by the NRA."
- Belgium: "Capacity reallocation storage too slow to follow capacity allocation public distribution (based on market shares)."
- Czech Republic: "There have been complaints that current CAM are not consistent with nTPA. The new rules are now being prepared."
- Germany: "informal complaints"
- Spain: "There have been informal comments on the complexity of the procedure."

4.5 Key questions on CAM

First Come First Served (FCFS)

The results of the survey show that where integrated storage operators apply FCFS, it may result in unfair and discriminatory allocations of capacity:

- → On average 49% of the capacity is booked by affiliates, but where FCFS is applied 80% of capacity is booked by affiliates.
- → In the cases where FCFS is applied, the CAM were developed by the SSOs almost only in cooperation with storage customers, which account for 81% of the booked capacity.
- → On average, the refusal rate for capacity requests was 24%. Where FCFS is applied, the refusal rate was 34% compared with a 0% refusal rate when applying CGWC
- → On average 20% of the capacity is locked in contracts longer than 5 years; where FCFS is applied 68% of the capacity is locked in contracts longer than 5 years

Therefore the key questions to be considered when applying FCFS are:

- → Do affiliates benefit unduly when FCFS is applied by an integrated SSO?

  and in general

- → does FCFS treat new entrants and incumbents equally?

On average, 73% of the countries have legal requirements for CAM. This rate is lower in the countries applying FCFS.

Capacity Goes with the Customer (CGWC)

Applying CGWC is effective in that there have been no refusals of capacity requests reported. On average, 38% of the SSOs report that they have capacity available in 2009; 100% of the SSOs using CGWC have reported available capacity in 2009.

When using CGWC, it must be assess whether new entrants and incumbents are treated equally. The capacity allocation in the first step has to take into account the flexibility already available in the portfolio of a shipper. Shippers with a small customer portfolio could need more storage capacity. The allocation of storage capacity also needs to reflect the demand for gas supply flexibility required by the shipper as a result of its customer portfolio.

Sufficient capacity for other storage purposes must be assured. On average, 62% of the SSOs also offer unbundled firm products; for SSOs utilising CGWC, 33% of the SSOs offer unbundled firm products.

One of the main differences in the countries where FCFS is applied rather than CGWC is that NRAs were not involved in the development of the CAMs. In countries using CGWC, the NRAs and government were involved in the development of CAM.

Auctions

The survey shows that storage users view auctions (with open subscription period) as the most transparent, public and fair method of allocating capacity. From a theoretical point of view, auctions seem to be the best capacity allocation mechanism to achieve allocative efficiency and non-discrimination (and transparency). Additional research is needed on the different designs and frameworks for auctions that will be best suited to the gas wholesale market structures in Europe.

4.6 Applied CMP

The lack of available capacity within Europe means that requests for storage capacity are predominantly refused. About 50% of the WGV and the withdrawal rates of the responding SSOs are locked in contracts with a duration of more than 5 years. This percentage is much higher for SSOs that apply FCFS. Therefore, congestion management procedures are important for the storage access.

The CMP applied by SSOs are auction/pro-rata, secondary markets, CGWC, UIOLI (use it or lose it, with different variations), and also First come/committed first served (Table 2). It is not clear how FCFS works as a congestion management procedure. 57% of the SSOs that implement CMPs only use one measure, e.g., interruptible products. In total, 8 out of 29 SSOs do not apply CMP or did not provide information on the CMP implemented.

It is not possible to give the corresponding WGV, because CMP are usually applied in different combinations, making it difficult to separate out percentages for each.

Table 4: CMP applied in the case of contractual congestion

CMP	Number of SSOs
Interruptibles	4
Pro rata	2
Auction	1
UIOLI	1
Secondary markets	1
Capacity release	1
FCFS	1
CGWC	1
Combined CMP	
Auction/tender, pro rata	2
Auction, pro rata; interruptibles, UIOLI, secondary market	2
FCFS, CGWC	1
FCFS, auctions	1
CGWC, pro rata	1
Pro rata, secondary market	1
auction, UIOLI	1
Other answers	
No CMP	1
no contractual congestion	1
n.a.	6
total SSOs	**29**

The data does not provide a clear picture with regard to the effectiveness of different CMP in releasing unutilised capacity. Only a small amount of storage capacity was released in 2007. According to the SSO responses to the questionnaire, the level of secondary market trading remains limited.

NRAs did not express a clear preference for a particular CMP in their responses. The preferred mechanism is UIOLI, followed by secondary markets and capacity release/UIOSI (use it or sell it). Also CGWC is mentioned. Looking at the average of the preferences UIOLI and secondary markets get the best ranking.

The responses from storage users show a clear preference for secondary markets. Storage users also prefer CGWC and interruptible products. When looking at the average of the preferences, secondary markets were given the highest ranking. These are preferences of actual storage users, not potential storage users.

The most important question is the definition of available or unused capacity and the definition of a reasonable period: According to the settlement in transit, it must be evaluated if UIOLI in combination with a proceeding UIOSI is useful and applicable, as it is very difficult to determine the correct period of time that should pass before implementing these mechanisms.

"When capacity contracted under existing storage contracts has not or hardly been used over several years and contractual congestion occurs, the SSO shall primarily consider to submit a request to the relevant capacity holder for the use of the secondary market for unused capacity and ultimately have the right to temporarily take away the capacity right from the relevant capacity holder unless the capacity is needed to meet fluctuating demand." (Comment on UIOLI by an SSO)

Examples for applying Use It or Lose It (UIOLI) for storage capacity

- ***UIOLI on an interruptible basis – the case of Centrica***

Centrica storage sells contracts for firm gas storage volume and injection/withdrawal capacity. However, if storage users with firm contracts have not nominated all the available injection/withdrawal capacity or storage volume, Centrica storage can sell this on an interruptible basis to third parties.

1. Storage Volume

If the storage volume at Rough (UK) is unconstrained, for example, it is less than 60% full, then Centrica Storage has the option to sell volume on an interruptible basis to third parties. Therefore, third parties, who do not have firm capacity, can purchase interruptible capacity for use over short periods of time. When the storage facility becomes 80% full, Centrica Storage issues a volume curtailment notice. This notice gives those companies who have purchased interruptible volume a minimum of 10 calendar days to either remove their gas from storage or sell it to another company (that does have firm capacity).

Any gas storage capacity can also be sold on secondary markets.

2. Withdrawal and injection capacity

If injection or withdrawal capacity is unconstrained on any given day, then Centrica Storage can sell this capacity to third parties on an interruptible basis. Centrica Storage can sell interruptible capacity day-ahead using auctions or with-in day through pro-active calls to its customers. Contracts also allow for secondary trading of injection/withdrawal rights.

- ***UIOLI – the case of Enagas***

In Spain, a permanent UIOLI including bails (financial guarantees) is in force. The UIOLI applied is a permanent backwards UIOLI, including bails. This means that if one shipper has not used at least 80% of his capacity during the six months following the signing of the contract, he will permanently lose the unused portion of his capacity, including the proportional part of his financial guarantee (bails). Additionally, if at any time, the System

Technical Manager (Enagas) sees that a shipper is permanently misusing part of its capacity, Enagas may reduce the misused contracted capacity to that shipper and may take ownership of the proportional part of the financial guarantee.

Development of CMP

30% of the storage customers and 50% of the NRAs answered that they are involved in the development of CMP. 33% of the NRAs answered that there are special legal requirements for capacity allocation mechanisms and procedures, accordingly about 2/3 of respondents remarked that there are no legal requirements for CMP.

Without the legal basis for CMP it seems difficult to take legal action against discriminatory behaviour in CMP. In Germany for example, with a significant part of the total European storage capacity and the largest number of SSOs and storage sites, there are no specific legal requirements for CMP.

Complaints on CMP

NRAs of 2 member states responded that there were complaints on the applied CMP:

- Czech Republic: "General comment is that the incumbent holds unnecessary capacity. The incumbent holds a majority of the storage capacity, which is the subject of a legal case".
- Spain: "Following the procedure established by Regulation to appeal to CNE against capacity reductions due to underutilization, the CNE have resolved some complaints".

Secondary markets

In order to optimise the use of existing capacity, secondary market trading must be facilitated. In 2007, trading on secondary markets was, at most, 25% of the injections and withdrawals of the total capacity reported by 7 SSOs. The remaining SSOs did not have information about the level of secondary market trading.

Only 36% of NRAs stated that there are special legal requirements for a common trading platform (bulletin board) in their country. Of these cases, only 50% of storage users must place all secondary trades on this common platform. However, 64% of the NRAs responded that a common platform, based on the GGP-SSO, was voluntarily developed for users to trade directly among themselves without using the bulletin board; thus, the SSO does not receive information on capacity traded on the secondary markets. In order to facilitate secondary market trading, either incentives for storage users or appropriate legal measures must be taken. In addition, SSOs should be obliged to improve and enhance the platform for secondary trading according to consumers and market needs.

From the storage users' point of view, a pre-requisite to the development of a secondary market is the existence of a transparent, non-discriminatory and flexible primary market and with an obligation for users to sell unused capacity.

One respondent stated: *"secondary market could be facilitated by standardising capacity trading terms and conditions through the adoption of standard trading master agreements. For that purpose, SSOs and TSOs have to support the ongoing work of EFET that aims to create capacity trading master agreements for all the European markets. EFET has already published a list of recommendations for SSOs and TSOs in order to facilitate and harmonize capacity transfer rules and conditions. If a further step is taken forward a unique European platform could be developed to facilitate liquidity."*

4.7 Key questions on CMP

The main questions is how effective are the CMP in providing capacity release, as some CMP have not been practically tested. As there is still insufficient information on the contractual use of storage capacity, there is no information on the effectiveness of different CMP.

A congestion management procedure should first make the capacity available and secondly reallocate the capacity to existing or potential storage users. From the given data, it is not clear how the reallocation occurs when applying FCFS, auctions or secondary markets, which are allocation methods rather than congestion management procedures.

Another question is whether interruptible products are equal to other CMP, as they do not allocate firm capacity.

As SSOs and storage users have expressed a preference for the secondary market, it must be addressed how capacity traded on secondary market will, in practice, be made available to all existing and potential storage users in a non-discriminatory and transparent process.

Although there are examples of UIOLI for storage capacity, this procedure has not been used until now. The question that must be addressed is how a practical UIOLI can be designed for storage capacity.

4.8 Conclusions and recommendations

The results of the survey indicate that where FCFS is applied by integrated SSOs it may result in a discriminatory and unfair allocation of storage capacity. Where FCFS is the capacity allocation mechanism, a higher proportion of total capacity is booked by affiliated shippers (80%), there is a higher refusal rate for capacity requests (34%) and a greater proportion of storage capacity is locked in contracts with durations of more than five years (68%). Therefore, the framework for applying FCFS must be set by regulation and accompanying measures must be established to support non-discrimination.

In many cases, the legal position of the NRAs does not provide for sufficient regulatory oversight to ensure that, in countries where FCFS is applied, this will result in a non-discriminatory and fair allocation of storage capacity.

The effectiveness of CAM and CMP needs to be further investigated. Although there are, for example, UIOLI principles in place, there were no examples provided that show that they have been effectively used, in practice. The role of interruptible products also requires further investigation.

From the SSOs´ and the storage users´ point of view, secondary markets are seen as a market-based measure against hoarding. Further work is needed to determine a means by which secondary markets can be strengthened and ways that capacity trading can be facilitated by storage operators, while being sufficiently transparent to all potential storage users.

Due to the low response rate of the storage users, more work is needed to gain an understanding of their views on CAM and CMP.

4.9 Follow-up work on CAM and CMP in 2009

There are currently a wide range of different approaches to allocating capacity and managing congestion in Europe. Therefore, follow-up work for 2009 is envisaged with the aim to define preconditions under which the various mechanisms in different market situations are appropriate regarding the requirements for CAM and CMP stated in the GGP-SSO.

For the **assessment of different CAM and CMP,** ERGEG will draft a discussion paper for public consultation defining preconditions under which market situations the various mechanisms are appropriate, regarding the requirements for CAM and CMP stated in the GGP-SSO. Based on assessment and the outcomes of the public consultation, GGP on CAM and CMP for gas storage will be drafted in 2009.

Definitions

Definitions from GGP-SSO

Available storage capacity	the part of the technical storage capacity that is not contracted or held by storage users at that moment and is still available to the storage users for firm and interruptible services, and is not excluded from TPA under Article 2(9) of the Gas Directive.
Deemed nomination	A request for the use of storage capacity which has been made by the storage user or on behalf of storage users by an agreed third party, for example in relation to national balancing requirements.
Deliverability	the amount of gas that can be delivered (withdrawn) from a storage facility per time unit. The deliverability of a given storage facility is variable, and depends on factors such as the amount of gas in the reservoir at any particular time, the pressure within the reservoir, the compression capability available to the reservoir, the configuration and capabilities of surface facilities associated with the reservoir, and other factors. In general, a facility's deliverability rate varies directly with the total amount of gas in the reservoir. It is at its highest when the reservoir is most full and declines as working gas is withdrawn.
Final customer	customers purchasing natural gas for their own use.
Firm capacity	storage capacity contractually guaranteed as uninterruptible by the SSO.
Firm services	services offered by the SSO in relation to firm capacity.
Injectability	the complement of the deliverability or withdrawal rate. It is the amount of gas that can be injected into a storage facility per time unit. The injection capacity of a storage facility is also variable, and is dependent on factors comparable to those that determine deliverability. By contrast, the injection rate varies inversely with the total amount of gas in storage: it is at its lowest when the reservoir is most full and increases as working gas is withdrawn.
Interruptible services	services offered by the SSO, in relation to interruptible storage capacity.
Interruptible storage capacity	storage capacity that can be interrupted by the storage system operator according to the conditions stipulated in the storage contract/storage code. The contract/code may specify the permitted duration, frequency and timing of the interruptions. It may also specify the previous notice required and possibly a fee related to the duration of the interruptions.

National regulatory authorities (NRAs)	the bodies as assigned by national law with the responsibilities as defined by Article 25 of the Gas Directive.
Nomination	the prior reporting by the storage user to the SSO of the actual flow the user wishes to inject into or withdraw from the system.
Primary storage market	the market for storage capacity that is directly allocated by the SSO
Re-nomination	the reporting of a corrected nomination
Standard Bundled Unit (SBU)	units in which storage capacity may be sold, which give customers the right to inject, withdraw, and hold gas in store, with determined technical ratios. SBUs should reflect the technical characteristics of the storage facility or a group of storage facilities (aquifer, peak-shaving, etc.).
Secondary market	the market for trading storage capacity other than on the primary market.
Storage capacity	space, injectability and deliverability (expressed in normal or standard cubic meters or energy per time unit). All of them can be firm or interruptible.
Storage facility	a facility used for the stocking of natural gas and owned and/or operated by a natural gas undertaking. This includes the part of LNG facilities used for storage but excluding the portion used for production operations, and excluding facilities reserved exclusively for the use of transmission system operators in carrying out their functions (Gas Directive).
Storage penalty	the additional charge that storage system operators/storage users may have to pay after not respecting their contractual obligations, such as for having an imbalance between injections and withdrawals.
Storage system operator (SSO)	a natural or legal person responsible for operating and maintaining a storage facility.
Storage user	a customer of an SSO, who has signed the relevant storage code or entered into storage contracts with the SSO for storing gas. Storage users may include, but are not limited, to final customers, supply undertakings, wholesale customers, traders, DSOs and TSOs, to the extent that storage is necessary for the TSOs and DSOs to carry out their functions.
Technical storage capacity	the maximum storage capacity (injectability, deliverability and space) that the SSO can offer to storage users, excluding storage capacity for SSOs operational needs.

Unbundled storage service	service that allows space, injectability, and deliverability to be traded separately
Unused Storage Capacity	any part of the technical storage capacity contracted or held by users that has not been nominated for use, and is not excluded from TPA under Article 2(9) of the Gas Directive.
Withdrawal rate:	see Deliverability.

Definition of CAM and CMP

Capacity allocation mechanisms	Procedures or mechanisms to be applied for assigning capacity to requesting parties, as long as there is no congestion.
Congestion management procedures	***i****n the event that demand exceeds capacity offers, congestion management procedures are needed to resolve the congestion and, in some cases, to make unused capacities available or (re-)allocate capacity to requesting parties.*

Definition of Congestion

Contractual congestion	Congestion occurring when the demand for firm capacity exceeds the technical capacity, in other words, more firm capacity is demanded than can be made available. Such a situation would be characterised by short-term contractual congestion if it were not economically justified to invest in new capacity to resolve the congestion problem. For both short-term and long-term contractual congestion, not all capacity is necessarily used in terms of gas actually being injected or withdrawn. Contractual congestion simply means that firm capacity bookings have been made up to the level of technical capacity and that demand for additional capacity bookings exists. Although contractual congestion may be caused by strategically motivated capacity hoarding, it may also result from the 'normal' economic considerations to reserve capacity to meet fluctuating demand. Where contractual congestion is caused by capacity hoarding, it results in an inefficient and sub-optimal use of the technical capacity of the network concerned, if this results in non-usage by other network users seeking capacity.

Physical congestion	a situation where the level of demand for actual deliveries exceeds the technical capacity at some point in time. Contrary to contractual congestion, a situation characterised by physical congestion indicates that nominations for both firm and interruptible capacity (the demand for actual deliveries) exceed the technical capacity available at some point in time. Physical congestion can only occur when contractual congestion occurs. In the case of physical congestion, interruptible capacity is interrupted since the requested demand for physical flows, i.e., the sum of nominations under firm contracts and those under interruptible contracts, are higher than the technical capacity.

1 Questionnaire for Storage Users

1.1 General

1.1.1 To which category does your company belong?

Wholesaler	20
Trader (at hubs)	16
Regional supplier	13
Local supplier	4
Industrial customer	2
Power plants	4
TSO's (operational purpose)	0
Shipper	1
Service operator	1
Others	2

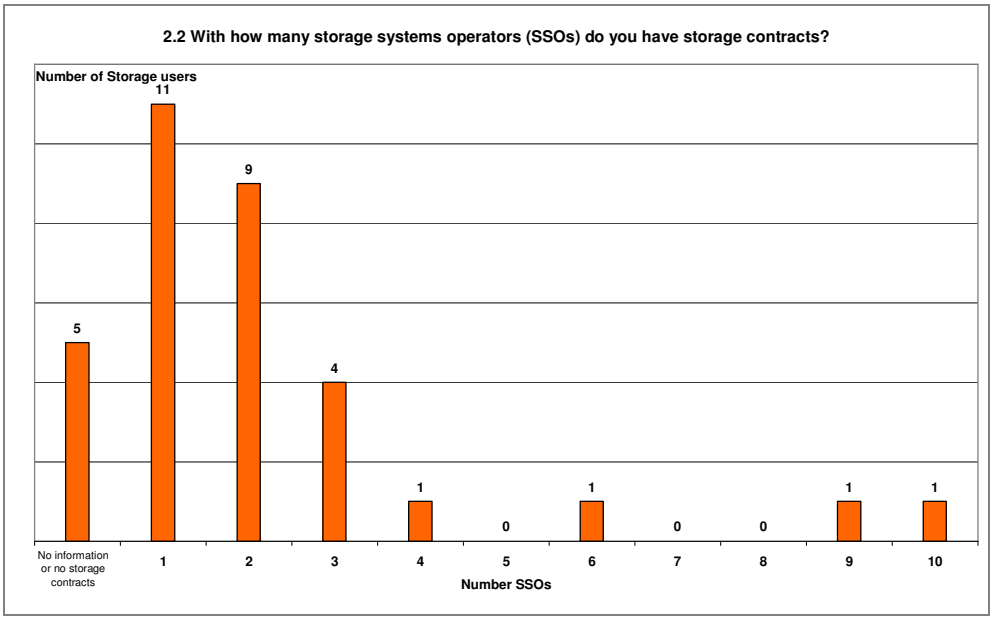
1.2 Statistical Data on Storage System Utilization

1.2.1 How much total contracted storage capacity do you have?

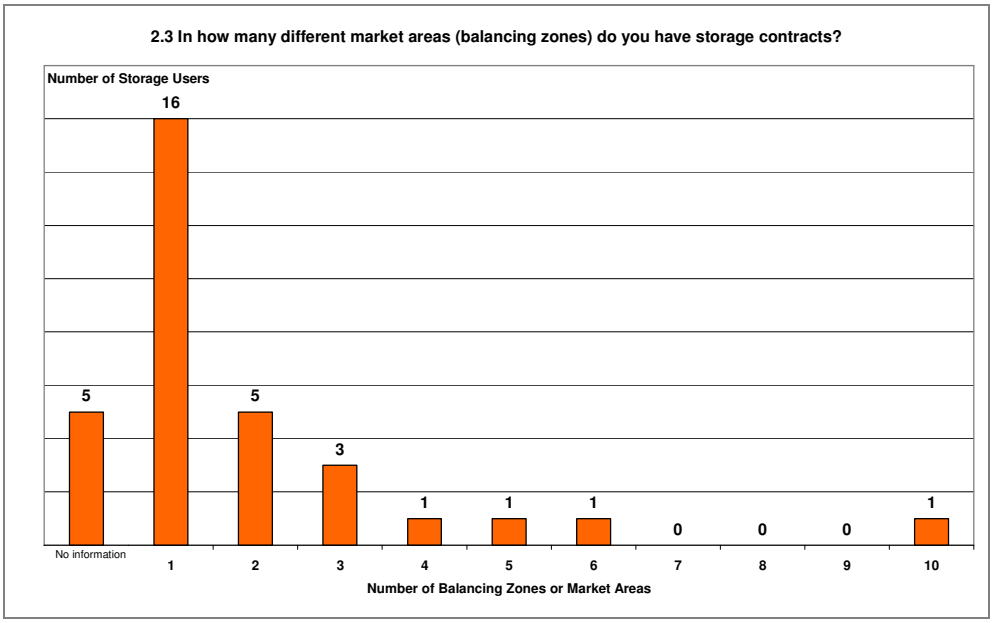
Working gas volume in mcm		**Withdrawal rate in cm/h**	
< 100 mcm	8	< 50,000 cm/h	8
100 mcm - 2,000 mcm	13	50,000 cm/h - 1,000,000 cm/h	12
> 2,000 mcm	4	>1,000,000 cm/h	5

Working gas volume in GWh		Withdrawal rate in MWh/h	
< 1.000 GWh	5	< 500 MWh/h	5
1.000 GWh – 20.000 GWh	9	500 MWh/h – 10.000 MWh/h	8
> 20.000 GWh	1	>10.000 MWh/h	2

1.2.2 With how many storage systems operators (SSOs) do you have storage contracts?



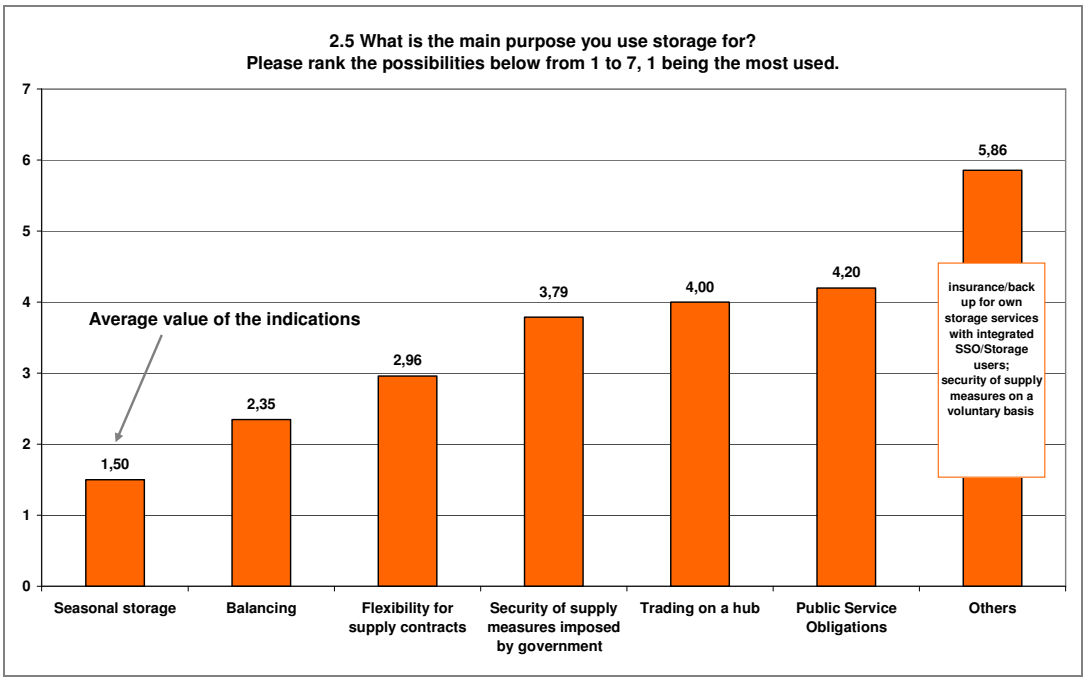
1.2.3 In how many different market areas (balancing zones) do you have storage contracts?



1.2.4 What kind of storage products do you use?

1. Firm bundled services	25
2. Firm unbundled services	9
3. Interruptible bundled services	4
4. Interruptible unbundled services	6
5. Others, please describe: option on conditional withdrawal capacity, emergency products	3

1.2.5 What is the main purpose you use storage for? (Please rank the possibilities below from 1 to 7, 1 being the most used)



1.3 Storage Capacity Allocation Management

1.3.1 How are you informed about the capacity allocation mechanisms and procedures applied by the SSO?

Information on SSO with whom you already have storage contracts		**Information on SSO you have filed a request for storage capacity with**	
Website of SSO	23	Website of SSO	19
Direct contact with SSO (personal, telephone call)	19	Direct contact with SSO (personal, telephone call)	14
Press release	5	Press release	3
Letter or e-mail	17	Letter or e-mail	14
Others: network code	1	Others: no information is released, network code	2

1.3.2 Were you involved in developing the capacity allocation mechanisms and procedures?

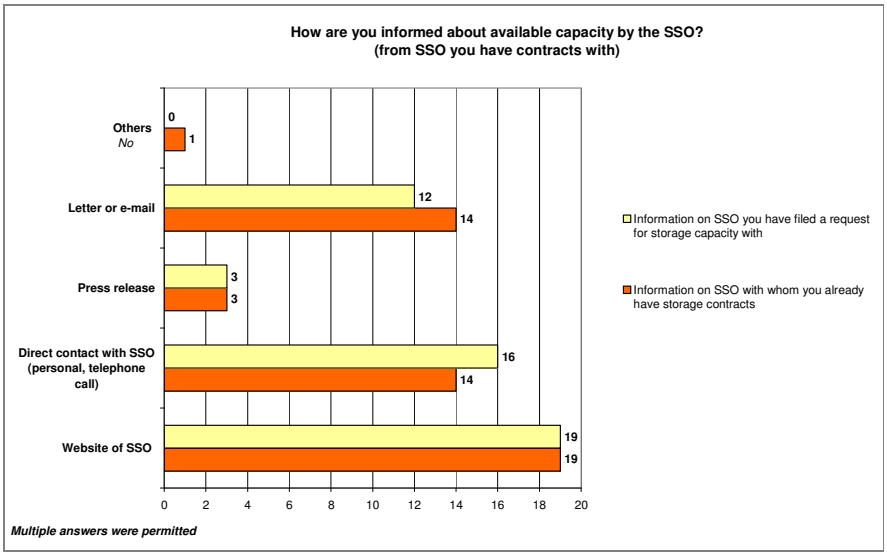
Yes	13
No	20

If yes, please describe in which way.

-) Being asked by SSO
-) It has been created a Storage consultation Committee by which every storage user can express his own point of view or suggestion
-) Participating in working groups for the development of the Net Code
-) By consultations with NRAs
-) Via contract negotiations
-) Public consultation by Federal Regulator CREG - possibilities of involvement rather poor

1.3.3 How are you informed about available capacity by the SSO?

Information on SSO with whom you already have storage contracts		Information on SSO you have filed a request for storage capacity with	
Website of SSO	25	Website of SSO	19
Direct contact with SSO (personal, telephone call)	21	Direct contact with SSO (personal, telephone call)	16
Press release	4	Press release	3
Letter or e-mail	16	Letter or e-mail	12
Others	*0*	Others: no information is released	1



1.3.4 How many requests for storage capacity did you make in 2007?

86

1.3.5 How many of these requests for storage capacity were refused?

20

1.3.6 Please indicate the reasons for the refusals

-) Lack of available capacity

-) Our offer during the auction was under the reserve price

-) All UGS capacity is required to keep obligatory gas reserves in the case of gas import, to fulfil gas sales contracts obligations, for gas production reasons

1.3.7 Do you think the capacity is allocated in a non-discriminatory way?

Non-discriminatory	24
Partially non-discriminatory	5
Discriminatory	2

Please give examples for your choice:

Non-discriminatory:

-) Auctions, Auction rules published by SSO

-) Same information from other market participants

-) Capacity is allocated or refused for all in same way

-) Transparent general terms and conditions

Partially non-discriminatory:

-) There is no Use it or lose it concept in place. Traditional companies are occupying capacity to prevent market entrants to serve the domestic market

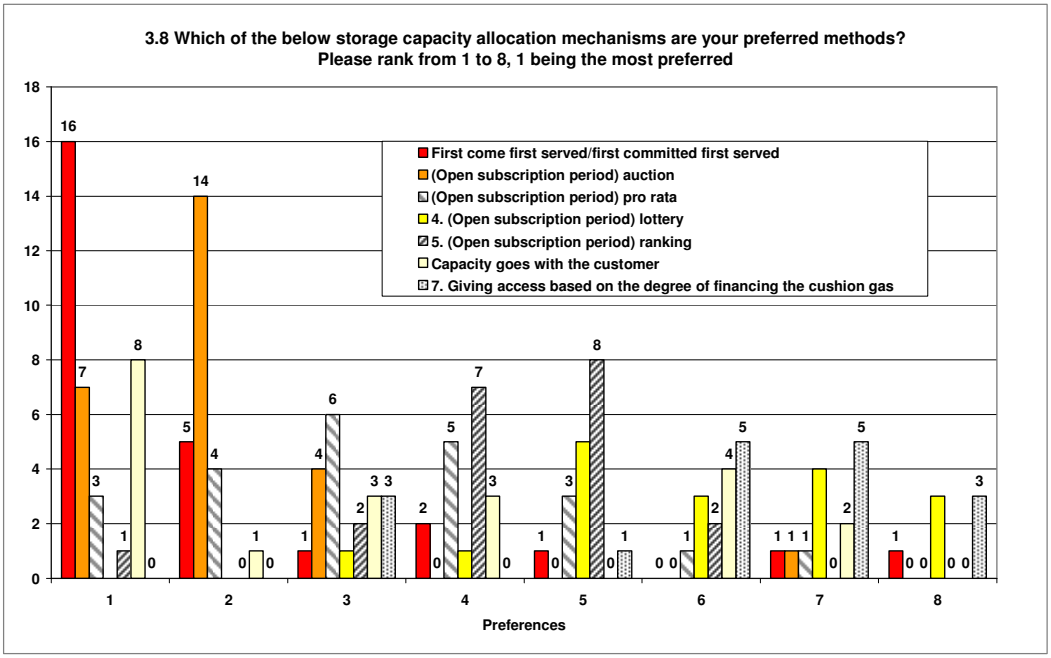
-) In some countries, storage capacity goes in priority to players who have final clients portfolios (mainly the historical incumbents). We understand that the purpose of this mechanism is to protect final consumers against gas paucity during peak consumption

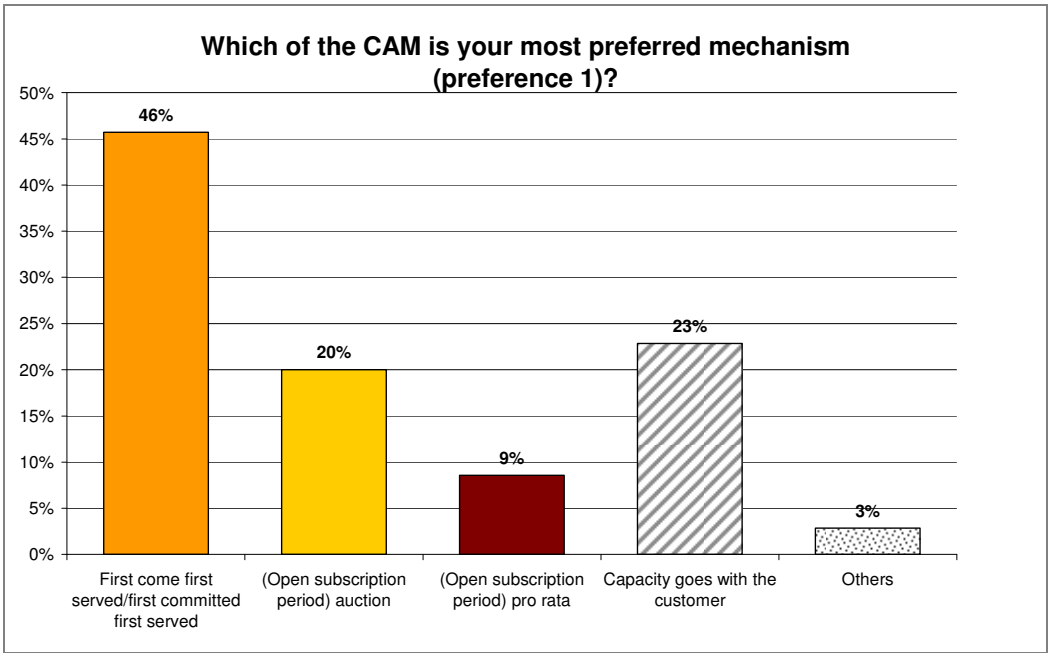
-) The current pro-rata allocation mechanisms are partially discriminatory as there is a potential for misuse.

Discriminatory:

-) The Allowance process excludes the industrials consumers with low modulated profiles in applying them negative access rights

1.3.8 Which of the below storage capacity allocation mechanisms are your preferred methods? (Please rank from 1 to 8, 1 being the most preferred)





Please explain the reason for your first choice:

First come first served/First committed first served:

-) Possibility also for small suppliers of having opportunity to get storage capacities

-) Provided the capacity is sold on non-discriminatory terms, this method delivers the best value to the customer and the SSO. Those who value storage most can procure the desired volume first and with due discrimination in price which best reflects their valuation and suits the SSO. There is also a higher degree of certainty that the customer will get their desired volume.

-) Planning reliability

-) Only applicable for markets with storage - to-storage - competition

OSP auction:

-) Most transparent process

-) A public and fair method

-) Competitive markets provide a most true price for storage. An allocation mechanism which is based on a voluntary, competitive and commercial process will increase the development of a functioning market with cost-based market-prices for storage capacity and adds investment signals for new storage.

-) Auctions appear to be the most market-oriented one but it can properly apply only on gas markets where liquidity is well developed. Liquidity is the only guarantee that auction prices stay correlated to the sole summer-winter market spread and not to any other considerations. Moreover, pricing storage capacity against the market means that all the winners will try to hedge their capacities immediately after the auction process; sufficient liquidity will prevent, at that moment, any sudden movements of the market prices.

OSP ranking:

-) This choice is selected due to the imposed by the regulator function of public supplier

Capacity goes with the customer:

-) In a system with a very low level of gas storage capacity to secure customer supply should be the first goal of the storage capacity

-) Link with portfolio needs

Do you have any suggestions for improvements of the storage capacity allocation mechanisms?

-) First of all SSO should be formed as an independent entity (no influence of gas trading owner) in Poland. The rules of TPA to storage installation should be implemented

-) Publication of Storage Capacity Owners

-) The first point is the good timing of capacity allocation procedures. In fact, market participants need to be able to buy storage capacities at any time of the year and for different periods of time going from Long Term periods (3 or 5 years) down to very Short Term period (day-ahead). They need flexibility.OSP's and auctions should be held several times a year according to a fixed planning. For instance: - An OSP every 3 years for the following 3 gas-years and for 50% of the whole available capacity - An OSP every 2 years for the following 2 gas-years and up to 70% of the whole available capacity - An annual SP/Auction for the following gas-year and up to 90% of the whole capacity - The remaining 10% should be sold through seasonal down to daily auctions (unbundled working volume, injection and withdrawal capacities).The second point that would facilitate TPA to storage is to offer bundled Storage/Transport capacities whenever a transportation capacity is needed on the adjacent transportation system.

-) Make capacity allocation on an European level, rather than on a country level. Capacity allocation could take into account the flexibility already available in the portfolio of a shipper

-) The storage must be regarded as a key infrastructure and the consumers must have priority in the allocation process

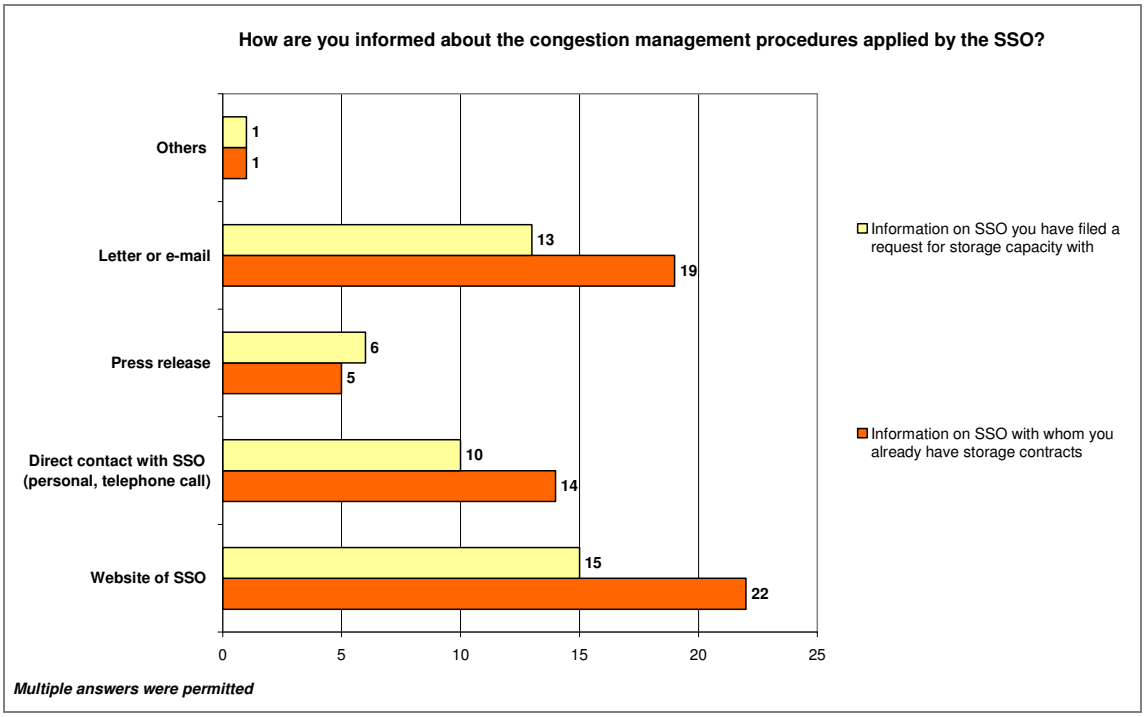
-) Transparency would be very important

-) Concerning the European natural gas market the rules to access at the storage should be the same. With the aim to avoid disadvantage for some specific categories of customer.

1.4 Storage Congestion Management Procedures

1.4.1 How were you informed about the congestion management procedures applied by the SSO?

Information on SSO with whom you already have storage contracts		Information on SSO you have filed a request for storage capacity with	
Website of SSO	22	Website of SSO	15
Direct contact with SSO (personal, telephone call)	14	Direct contact with SSO (personal, telephone call)	10
Press release	5	Press release	6
Letter or e-mail	19	Letter or e-mail	13
Others: contract, network code	*1*	Others: no information has been released, network code	*1*



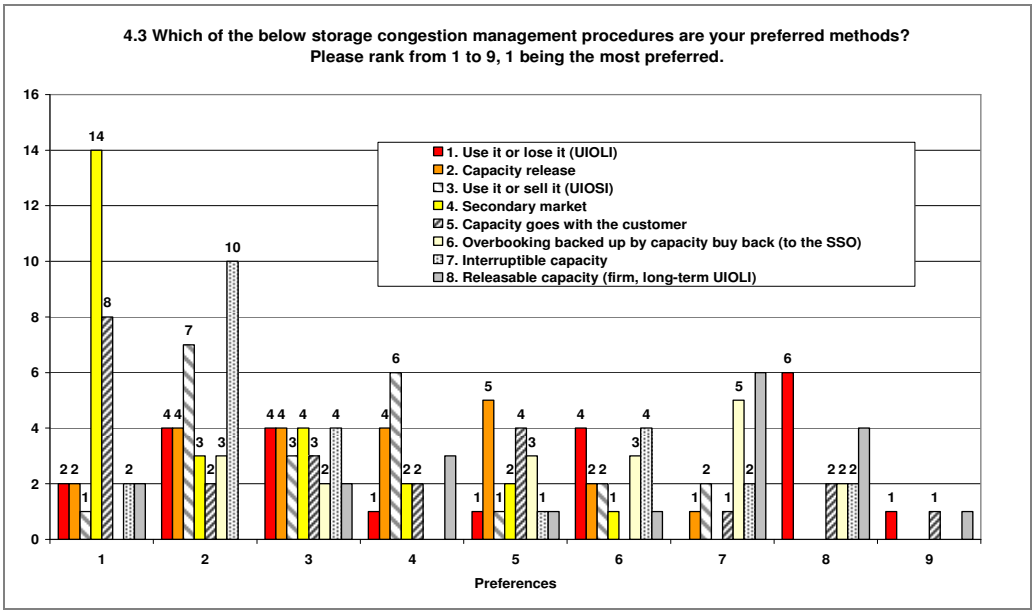
1.4.2 Were you involved in developing the CMP?

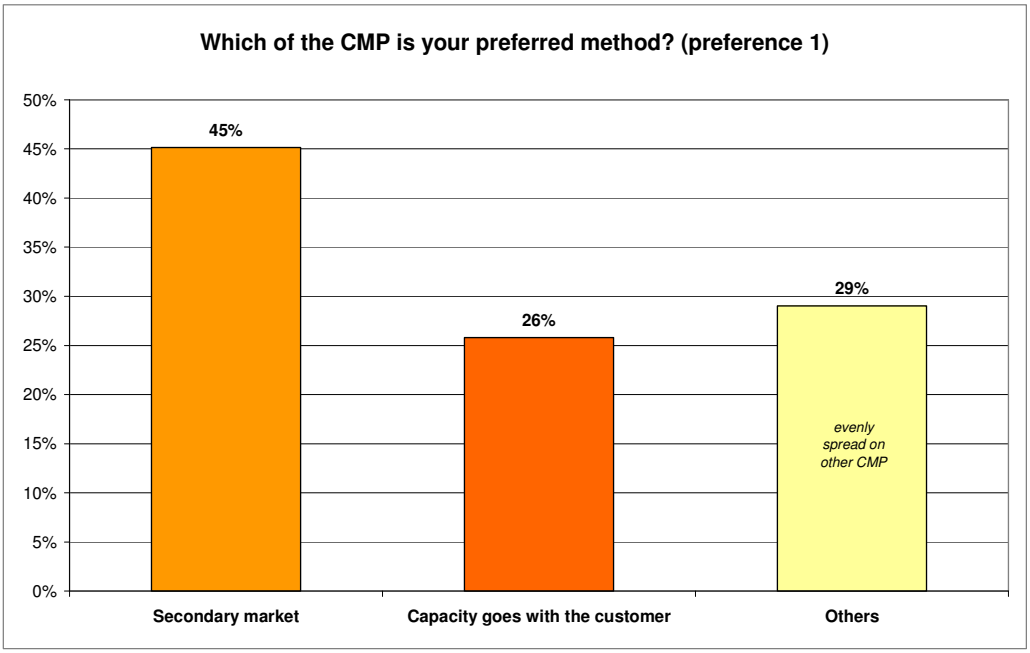
Yes	10
No	23

If yes, please describe in which way.

-) Participation on auction
-) Participating in working groups for the development of the Net Code although the final decision is in the Regulator's hands
-) By consulations with NRAs
-) It depends on SSO in which way being asked

1.4.3 Which of the below storage congestion management procedures are your preferred methods? Please rank from 1 to 9, 1 being the most preferred.





1.4.4 Please explain the reason for your first choice:

Use it or lose it (UIOLI):

-) In our view, this method best ensures the use of all available capacity when demand exists. Ideally this would be offered as interruptible capacity.

Capacity release:

-) A public and fair process

Secondary market:

-) Allows customer to manage exposures rather than SSO

-) Market based, as long as there is competition between SSOs

-) A shipper can decide best what to do with capacity as long as there is a marketplace to sell it on.

-) It's oriented to competition and market

Capacity goes with the customer:

-) In a system with a very low level of gas storage capacity to secure customer supply should be the first goal of the storage capacity

-) Link with portfolio needs

-) The system have to be in the position to release capacity only to the customer that need volumes for seasonal scope.

Interruptible capacity:

-) We do not have experience with any other procedure, so we think this is quite fair

Releasable capacity (firm, long-term UIOLI):

-) It is the most safe opportunity to calculate with

1.4.5 Do you have any suggestions for improvements of the storage congestion management procedures?

-) Investments

-) Transparency would be very important

-) Open a secondary market place like the HUB. Have the government invest in cushion gas

-) Priority of allowance for consumers

-) Solution on a European level. Possibility to nominate not used injection and withdrawal capacity

-) First of all SSO should be formed as an independent entity (no influence of gas trading owner)

-) Inapplicable at the moment due to limited number of entry points and external suppliers in the system

1.4.6 How could the use-it-or-lose-it principle be developed in an appropriate way for gas storage?

-) By the construction of new infrastructure

-) Daily usage checking at the nomination and daily auction

-) Where capacity is not being used, it should be offered on an interruptible basis to any customer who wants it at market based rates.

-) If a party does not nominate injection or withdrawal or the party nominates less than 100% usage of them than SSO should be obliged to send relevant information and offer the access capacity to other market players (electronic platform)

-) As a minimum the withdrawal capacity in the day should be lost if it is not nominated (then another shippers could use it). The UIOLI for storage capacity should be analised carefully

-) Space, injection and withdrawal unused capacities have to be released seperately (completely unbundled) on the secondary market.

-) Possibility for each user to nominate capacity not used by other users.

-) Only a SSO can decide this as he can see total storage use but with compensation method for shipper who loses the capacity. Although it is not easy to determine which shipper is not using storage

-) Any obligatory measures, like UIOLI, should only be used as a measure of last resort. They should be used to incentivise the use of a (voluntary) secondary market. The firm capacity holder should always be entitled to use its capacity up to the last possible moment. The UIOLI capacity should therefore always be sold as interruptible capacity, so that a second shipper can be interrupted when the first shipper decides to use its capacity after all. The SSO should develop a mechanism for the sale of this interruptible capacity that will allow for the development of the prices based on the market situation. The link between storage capacity and commodity or commodity space in the storage facility doesn't exist for pipeline capacity. This link has an effect on the way in which unused capacity can be sold for short term use and this should be taken into account when developing UIOLI for storage facilities.

1.5 Secondary Markets

1.5.1 How much of your total storage capacity in percent did you trade on secondary markets in 2007?

Capacity traded (withdrawal rate)		Number of trades
0%	19	-
< 25%	10	13
25% - 50%	0	-
50% - 75%	0	-
75% - 100%	0	-
100%	0	-

Capacity traded (injection rate)		Number of trades
0%	19	-
< 25%	8	10
25% - 50%	1	2
50% - 75%	0	-
75% - 100%	0	-
100%	0	-

What are your incentives/requirements on secondary markets from a sellers/buyers perspective?

Sellers perspective: -) A secondary market should enable injectability, space and deliverability rights to be traded separately -) To release excess storage capacity at a market price -) Relevant information just in time -) Market prices which are not regulated -) Development of secondary market board and enough storage capacity to setup a market -) The market should be liquid, to ensure true pricing of capacity -) Portfolio optimization
Buyers perspective: -) A secondary market should enable injectability, space and deliverability rights to be traded separately -) To acquire storage capacity to meet our needs at a market price -) Relevant information just in time -) To avoid over- regulation and any discriminatory measure -) Match capacity need with current use - improve flexibility -) Fair market value -) The secondary market of storage should not be an instrument of market and does not have to be opened to trading. We are in favour of a strong regulation at national and European levels of the key infrastructures and storage is one of these. -) Unregulated market prices, bundled structures, delivery points, clear SSO business conditions -) Public, safety place (capacity exchange) would be necessary to have for the secondary trades -) The market should be liquid, to ensure true pricing of capacity -) Balancing

1.5.2 Do you have any suggestions for improvements of secondary markets?

-) The introduction and development of a unique European platform for secondary storage capacity trading will increase the liquidity. -) We see a need for clear assignment provisions in contracts in order to develop trade on the secondary market -) Organization via SSO services and IT system -) Less restrictions given by the primary contracts with regards to - time line for assignment, - standardisation of storage contracts -) EASEEgas is developing a CBP on secondary capacity trading. After its completion it will possibly be extended and adapted for storage and LNG. We suggest the developments of EASEEgas in this aspect are taking into account when setting up a secondary markets -) The secondary market can work if there is enough space in storage. According to me there are no this kind of situation in Europe for lack of investments. Some SSO are doing investments but they are started in late.

2 Questionnaire for NRAs

2.1 General

14 NRAs responded

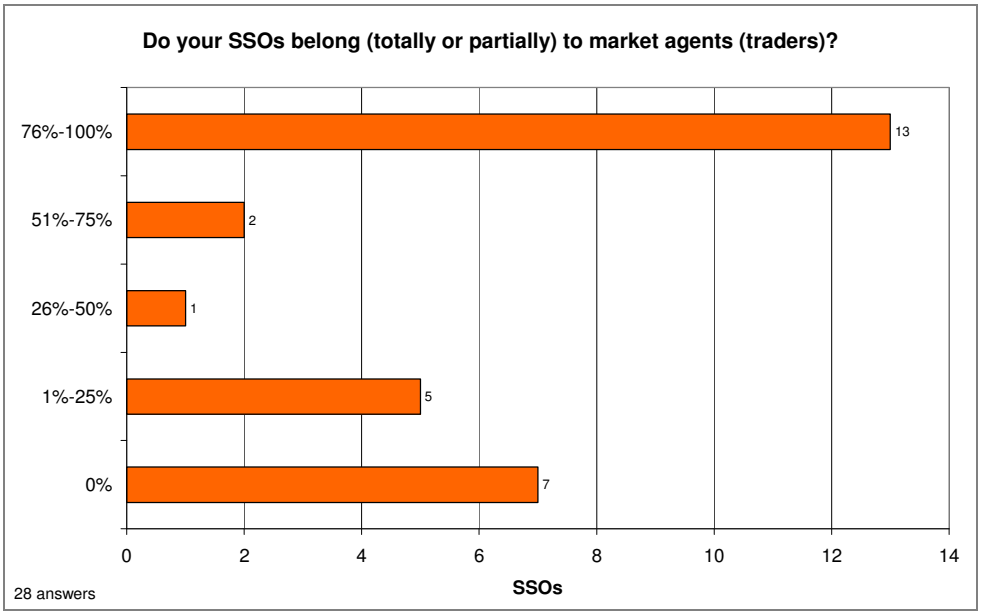
2.2 Background information on storage in your country

2.2.1 Storage facilities[11] in your country for each SSO

SSO	Technical capacity[12]			Does the SSO belong (totally or partially) to market agents (traders)?		
	Working gas volume mcm	Maximum deliverability (withdrawal rate) cm/h	Maximum injectability (injection Rate) cm	No	Yes	If yes, share
55*	6,264.2	507,193,253	936,407,126**	See figure	See figure	See figure

* including 27 SSOs in Germany

** excluding SSOs of Germany



[11] **Storage facility** means a facility used for the stocking of natural gas and owned and/or operated by a natural gas undertaking, including the part of LNG facilities used for storage but excluding the portion used for production operations, and excluding facilities reserved exclusively for transmission system operators in carrying out their functions (Definition 18 of the GGPSSO)

[12] **Technical storage capacity** is the maximum storage capacity (injectability, deliverability and space) that the SSO can offer to storage users, excluding storage capacity for the SSO's operational needs

2.2.2 How TPA to storage is implemented in your country?

1. rTPA with price regulation	5
2. nTPA	7
3. Other type of rTPA (please describe)	1
4. Exemption from regulation/TPA	1
5. Exclusion for TPA	1

2.2.3 As a NRA, do you receive information about storage contracts?

1. Yes	7
2. No	1
3. On request (legally foreseen)	5
4. Other (e.g. storage code), please specify: -) Regulation includes the obligation for TSOs, LSOs and SSOs to send a summary of TPA contracts signed during the year	

If yes, what kind of information do you receive?

1. Storage contracts submitted	9
2. Information about contracted capacity	10
3. Information about storage prices	9
4. Other information, please specify: -) Capacity booked, available and used, gas and capacity trading, other operational information as final statement of the previous thermal year. -) In Portugal, the capacity in storage facilities is allocated on a short term basis (one year), which means that a contracted or reserved capacity concept isn't applied. -) Standard public contract for Rough (CSL) customers; in addition, Ofgem sees who has purchased capacity and length of contract	3

2.2.4 Development of new storage sites:

How many storage projects are under construction (planned and committed) in your country in 2008?

Number of projects	Storage capacity	
	wgv in mcm	withdrawal rate in cm/h
41	21.550	not applicable

What kind of licences are needed for developing new storage sites?

Austria: Combined licence for production and storage in depleted fields

Belgium: Exploration, development and operation license

Czech Republic: government authorisation

Denmark: General licence to operate a storage - based on technical and financial assessment of the applicant- Ministerial approval for the specific project/storage site - Environmental licence - if the project

is deemed to have a significant impact on the environment.

France: Construction permit, Operation licence, Water Act permit

Germany: construction and operation of storages (independent of storage type) is subject to: - mining law, - laws pertaining to water and waterways, - laws perteining to nature conservation. licenses:1.) land planning statement (landesplanerische Feststellung als Ergebnis des Raumordnungsverfahrens) 2.) Authorisation of general operating plan (Genehmigung des Rahmenbetriebsplans) and other licenses regarding water (fresh water supply / brine discharge) plus geomechanical expertise, proof of a security management system and others 3.) in cases of salt cavern storages: proof of holding the mining rights for salt

Italy: Environmental Impact Evaluation

Portugal: Concession

Slovak Republic: Licence for storage issued by the NRA based on the certificate of compliance of the Investment plan with the long-term concept of the energy policy issued by the Ministry to the applicant (upon written request of the applicant who intends to develop a new/extended storage site)

Spain: Exploration & research licence and exploitation licence

Turkey: Natural Gas Market Law Article 4/d/1 states that: “The legal entities must obtain license from NRA to engage in ground and underground storage activities for natural gas in gas or LNG state.

By which relevant regulatory authority are they issued?

Austria: BMWA, Federal Ministry of Ecomics

Belgium: Competent minister

Czech Republic: Ministry of Industry and Trade

Denmark: The Danish Energy Authority. The Regional Environmental Authority

Estonia:

France: Prefect; Energy Ministry

Germany: 1.) authority of a "Bundesland" (Landesplanungsbehörde) 2.) Mining authority in charge (but involving relevant local authorities) 3.) Mining authority or landowner

Italy: Ministry of The Economic Development

Slovak Republic: Licence for storage issued by the NRA based on the certificate of compliance of the Investment plan with the long-term concept of the energy policy issued by the Ministry to the applicant (upon written request of the applicant who intends to develop a new/extended storage site)

Spain: Exploration & research licence and exploitation licence

Turkey: Storage license is granted by Energy Market Regulatory Authority

Are there differences between licences for incumbents and new entrants in the storage markets?

If yes, which ones?

There are no differences.

Exemptions under article 22 for storage facilities

Have you granted exemptions under article 22 for storage projects?

1. Yes	0
2. No	13
3. Not responsible for granting exemptions	0
4. Other exclusions of storage capacity from TPA (please describe)	0
5. Just provide an opinion regarding exemptions, please explain	-

Have other relevant national regulatory authorities granted exemptions under article 22 for storage projects?

1. Yes	0
2. No	13
4. Other exclusions of storage capacity from TPA (please describe)	0

If yes, for which storage site and for which part of the capacity the exemptions have been granted? Please provide in normal cm or kWh

No exemptions under article 22 and national law.

How many procedures of granting exemptions for storage projects are ongoing under article 22 or national law?

Article 22	0
National law	2

Currently there are two procedures of granting exemptions for storage projects under national law ongoing in UK.

For which storage site and for which part of the capacity the exemptions have been applied? Please provide in normal cm or kWh

Exemptions under national law	Total capacity		Capacity applicated	
Storage site	wgv in Million kWh	withdrawal rate in kWh/h	wgv in Million kWh	withdrawal rate in kWh/h
GDF Stublach	4.332	14.891.250	4.332	14.891.250
SSE Aldbrough II	2.274	to be confirmed	2.274	to be confirmed

2.3 Public Service Obligations

Are there PSO (Public Service Obligations) in your country?

1. Yes	6
2. No	6

If yes, how much storage capacity (withdrawal rate in normal cm or kWh per hour) is reserved for PSO?	no answers

On whom are these obligations placed?

Belgium: on SSO

Czech Republic: on NAP

Denmark: on the Danish TSO - Energinet.dk.

Italy: on storage users

Slovak Republic: on SSO, DSO, TSO (ranked by preference)

Spain: On last resort suppliers, which are shippers/traders authorized to sell gas to last resort consumers (mainly, houshold consumers)

Turkey: Storage obligations are placed on suppliers as import and wholesale companies

Is storage capacity needed for any PSO offered on a TPA basis?

1. Yes	2
2. No	4

2.4 Capacity allocation management

2.4.1 Are there special legal requirements for capacity allocation mechanisms and procedures?

1. Yes	8
2. No	3

If yes, which ones?

Austria: CAM should be non-discriminatory and transparent

Belgium: capacity reservation on pro rata market share public distribution

Czech Republic: The rules for CAM are described in ERO Decree No. 524/2006 Coll.

Denmark: Negotiated regime and ex post control by NRA. The legal requirement is the fundamental requirements of non-discrimination, objectivity and transparency.

France: Storage capacity, called "storage rights", is allocated in proportion to the supply portofolio of each suppliers.

Italy: A priority list for capacity allocation is defined: see 2.2.1

Slovak Republic: Ordinance of the Government No.409/2007, Code of Operation of the SSO

Spain: CAMs are regulated, approved by Royal Decree/Ministerial Order

Turkey: We are still under the preparation of the storage code, with the same mythology that was created for the Network code. We have in general PSO, TPA, CM…. etc. articles in our legislation. However following specific items in this questionnaire should be evaluated further in the storage code in details.

United Kingdom: CAMs are regulated, approved by Royal Decree/Ministerial Order

2.4.2 As a NRA, were you involved in the development of capacity allocation mechanisms and procedures?

1. Yes	7
2. No	4

If yes, in which way?

Belgium: The procedure is determined by law; the NRA is involved in fixing allocation timing and reallocation scheme's

Czech Republic: The ERO issues a public notice (No. 524/2006) which specifies the rules as open subscription period with

France: Energy ministry competence

Italy: AEEG defines the criteria for capacity allocation mechanisms

Portugal: The SSO's are responsible for proposing the capacity allocation mechanisms for the storage facilities and the NRA is responsible for their approval.

Slovak Republic: Within its legal powers, the NRA is authorised to determine or approve the method, procedures and conditions for access to underground storage facilities and gas storage

Spain: Since CAMs are regulated, the CNE elaborates a non binding report on the Royal Decree/Ministerial Order apporving the CAM, which is proposed and approved by the Ministry of Industry, Tourism and Trade

United Kingdom: We liaised with and provided input to the Competition Commission, and where appropriate approved associated changes to an industry code (the Uniform Network Code) which Ofgem must approve.

2.4.3 Please describe the capacity allocation procedures (applied by the SSOs)

Country/NRA	SSO 1	SSO 2	SSO 3
AUSTRIA	Requests come in through Online Capacity Booking System; allocation by first come first served	Requests come in by standard form published on the homepage, allocation by first come first served	Requests come in by standard form published on the homepage,allocation by first come first served
BELGIUM	capacity allocation on basis of pro rata market share public distribution allocations		
CZECH REPUBLIC	SSO 1 follows the rules described in the public notice (No. 524/2006).	SSO 1 follows the rules described in the public notice (No. 524/2006).	
DENMARK	Stenlille (DONG Energy): Until 2007: First-come-first-served From 2007: Tender + pro-rata reduction There are no SSOs in Estonia	Lille Torup (Energinet.dk):Until 2007: First-come-first-served (owned by DONG Energy as storage 1)2007: Tender + pro-rata reduction 2008: Auction	
FRANCE	Cf. 3.1.By Gaz de France DGI, the few capacity which is not allocated in proportion to the supplier portofolio is allocated through auction.	Cf. 3.1. By TIGF, the few capacity which is not allocated in proportion to the supplier portofolio is allocated on a pro	

		rata basis.	
ITALY	SSO 1 applies the capacity allocation procedure as defined by AEEG	SSO 2 applies the capacity allocation procedure as defined by AEEG	
PORTUGAL	The capacity allocations for the storage facilities occur simultaneously with the scheduling procedures.There are three kinds of scheduling procedures: once a year, for each month and each week.The market agents participate in the scheduling procedures with their intentions of capacity usage (storage, injection and withdrawal) and the capacity is allocated directly if all market agents' intentions could be fulfilled. In case of congestion the capacity is allocated by auctions.The capacity not allocated in the yearly scheduling procedure is allocated subsequently in the monthly scheduling and weekly scheduling. The capacity for injection and withdrawal is also nominated for each gas day.	The capacity allocations for the storage facilities occur simultaneously with the scheduling procedures. There are three kinds of scheduling procedures: once a year, for each month and each week.The market agents participate in the scheduling procedures with their intentions of capacity usage (storage, injection and withdrawal) and the capacity is allocated directly if all market agents' intentions could be fulfilled. In case of congestion the capacity is allocated by auctions. The capacity not allocated in the yearly scheduling procedure is allocated subsequently in the monthly scheduling and weekly scheduling. The capacity for injection and withdrawal is also nominated for each gas day.	
SLOVAK REPUBLIC	They are based on storage contracts on fixed or interruptible storage capacity:- separate fixed services offered to customers under conditions set by law - free working volume - separate interruptible services Procedure: 1/Binding storage capacity request submitted by a customer 2/Provided it is in compliance with law, the storage capacity allocation is confirmed by the SSO and within 10 days followed by conclusion of the gas contract on gas storage		
SPAIN	Annually underground storage capacity is allocated to traders/shippers according to their SoS obligations, to last resort supplies' needs for demand balancing and to the Thecnical System Manager needs to comply with its network management obligations. Afterwards, if spare capacity is available, then this capacity is allocated in an auction		
UK	Centrica Storage Ltd – Bilateral negotiation, with fallback of auction	SSE Storage Ltd - Auction	National Grid - Auction

2.4.4 How are the CAM made transparent to the storage customers?

Austria: Published on the homepages

Belgium: Publication on website SSO and in Services Catalogue

Czech Republic: Each SSO publishes rules, prescribed by ERO in the abovementioned public notice, in its code which is publicly available.

Denmark: - Customer meetings - both plenary and bilateral.- Publication on company web pages -

English and Danish - Publication in the companies' General terms and conditions - English and Danish - distributed to customers in the Register of Customers and available on the companies' web pages.

France: The CAM are public rules

Germany: varying - typically online publication

Italy: Through the Storage Access Code: offering and allocating of storage capacity are also published on the SSO's website

Portugal: The capacity allocation mechanisms are approved by the NRA and published in the official journal and in the NRA and SSO's web pages.

Slovak Republic: After the fixed/ interruptible storage capacity or separate fixed service is allocated, the information shall be published on the website according to the provisions of the Code, based on the primary law.

Spain: They are public, since they are approved by Royal Decree/Ministerial Order

United Kingdom: They are published on individual storage operator websites.

2.4.5 Have there been formal or informal complaints about the capacity allocation mechanisms applied?

1. Yes	5
2. No	7

If yes, which ones?

Austria: One SSO allocated storage capacity in an intransparent way. The SSO changed the CAM after taking legal action by the NRA.

Belgium: not sufficient available capacity, capacity reallocation storage too slow to follow capacity allocation public distribution (based on market shares).

Czech Republic: There have been complaints that current CAM are not consistent with nTPA. The new rules are now being prepared

Germany: informal

Italy: Results are sent by SSOs to AEEG for verification and approval

Spain: There have been Informal comments on the complexity of the procedure

2.4.6 Is there any legal basis for applying open season in the case of new storage site developments in your country?

1. Yes	3
2. No	9

If yes, which ones?

Spain: The Ministry of Industry, Tourism and Trade can establish a different CAM for congested infrastructures and international connection pipelines, in order to improve the access to these facilities

2.4.7 Is there storage capacity reserved for short term contracts (less than one year)?

1. Yes	4
2. No	7

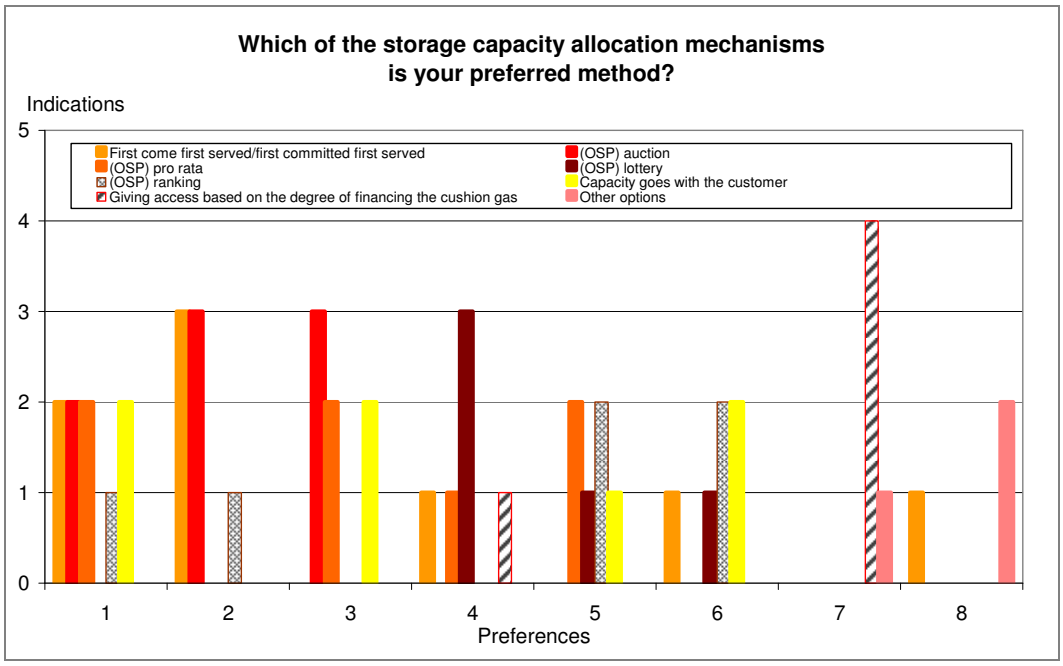
If yes, how much in cm/h withdrawal rate	no answers

2.4.8 Is there an obligation to provide short term storage contracts (less than one year)?

1. Yes	4
2. No	8

2.4.9 Which of the below storage capacity allocation mechanisms is your preferred method? (Please rank from 1 to 8, 1 being the most preferred)

1. First come first served/first committed first served
2. (Open subscription period) auction
3. (Open subscription period) pro rata
4. (Open subscription period) lottery
5. (Open subscription period) ranking
6. Capacity goes with the customer
7. Giving access based on the degree of financing the cushion gas
8. Other options (please describe):



2.4.10 Explain the reason for your first choice

First come first served/first committed first served:

Austria: only in case of available capacities otherwise open subscription period/auction most preferred because it is most market based

(Open subscription period) Auction:

UK: Our preference is for auctions. The main aim is to ensure that the capacity allocation mechanism supports the competitive market.

Denmark: Auction is a market based sales mechanism which in principle is the best way of ensuring that the capacity is sold at the right value. It assures the highest degree of transparency and objectivity in the allocation process. It may be difficult for NRAs to control vertically integrated undertakings in e.g. a first-come-first-served regime.

(Open subscription period) pro rata:

Germany: Auction mechanisms would be a preferred option, since it is the only true market- based mechanism. Currently, the pro-rata CAM seems to be more favourable as it is a fair and non-discriminatory principle especially with regard to storages in Germany that are not fully (ownership) unbundled. (assuming that an affiliated company could always win an auction, since money stays in the same affiliated group)

Spain: When storage is scarce and there are regulatory SoS obligations, the most convenient mechanism is pro-rata according to SoS obligations, in order to allow the agents to comply with their obligations.

Capacity goes with the customer:

Belgium: Ranking based on market mechanisms.

Italy: Is compliant with the legal obligation for the storage users to guarantee a correct modulation for small residential customers and the actual limitation of available storage performance

2.4.11 Do you have any suggestions for improvements of the storage capacity allocation mechanisms?

Austria: transparent and available in english language

Czech Republic: The ERO would like to introduce electronic auctions of storage capacities under currently valid nTPA

France: The French regulator is not competent for the CAM

Germany: apply auction / pro-rata mechanism

Spain: It should take into account legal SoS requirements, if any, and the competition advantage for shippers that have access to the storage, in order to avoid procedures which may make the access easier for incumbents

United Kingdom: If a complaint was raised that capacity allocation mechanisms were not working correctly we would investigate, which could subsequently lead to operational changes.

2.5 Congestion management procedures (CMP)

2.5.1 Are there special legal requirements for CMP?

1. Yes	4
2. No	8

If yes, which ones?

Czech Republic: The rules for CMP are described in ERO Decree No. 524/2006 Coll.

Estonia: No CMP have been developed, since there are no SSOs in Estonia

France: No, as capacity goes with the customer ("capacity rights" system, cf. above).

Slovak Republic: in accordance with the provisions of the law

Spain: They are regulated, approved by Royal Decree

United Kingdom: Rough and National Grid's LNG facilities

2.5.2 As an NRA, were/are you involved in the definition of CMP?

1. Yes	6
2. No	6

If yes, in which way?

Czech Republic: The rules for CMP (as defined in the Regulation 1775/2005/EC) are described in ERO Decree No. 524/2006 Coll. as follows: If it is not feasible to satisfy all applicants for storage capacity booking the storage system operator shall allocate the free storage capacity in proportion to the amounts in the requests. Where a request exceeds the free storage capacity the storage system operator shall reduce this request to the level of the free storage capacity before allocating the free storage capacity.

Italy: applying a pro rata criteria to solve the situations of congestion through the predefined priority mechanism

Portugal: The SSO's are responsible for proposing the congestion management procedures for the storage facilities and the NRA is responsible for their approval.

Slovak Republic: Within its legal powers, the NRA is authorised to determine or approve the method, procedures and conditions for access to underground storage facilities and gas storage

Spain: Since CMPs are regulated, the CNE elaborates a non binding report on the Royal Decree, which is proposed and approved by the Ministry of Industry, Tourism and Trade

United Kingdom: Ofgem approved the original contract for Rough and has veto over any changes. Amendments to LNG contract are achieved through modifications to an industry code (the UNC) which Ofgem must approve.

2.5.3 Please describe the CMP (applied by the SSOs)

Country/NRA	SSO 1	SSO 2	SSO 3	SSO 4	SSO 5
AUSTRIA	Offer of interruptible contracts; pro rata reduction	Pro rata reduction	Offer of interruptible contracts; pro rata reduction	Pro rata reduction	Pro rata reduction
CZECH REPUBLIC	pro-rata, secondary market, interruptible capacity	pro-rata			
DENMARK	Nominations for interruptible capacity will not be met.				
FRANCE	Capacity goes with customer ("capacity rights" system, cf. above).	Capacity goes with customer ("capacity rights" system, cf. above).			
ITALY	Pro rata criteria on priority mechanism	Pro rata criteria on priority mechanism			

PORTUGAL	The capacity allocations for the storage facilities occur simultaneously with the scheduling procedures.There are three kinds of scheduling procedures: once a year, for each month and each week. The market agents participate in the scheduling procedures with their intentions of capacity usage (storage, injection and withdrawal). In case the capacity programmed by the market agents' cannot be fulfilled (congestion), the allocation method is marked based (auctions).	The capacity allocations for the storage facilities occur simultaneously with the scheduling procedures. There are three kinds of scheduling procedures: once a year, for each month and each week. The market agents participate in the scheduling procedures with their intentions of capacity usage (storage, injection and withdrawal). In case the capacity programmed by the market agents' cannot be fulfilled (congestion), the allocation method is marked based (auctions).			
SLOVAK REPUBLIC	-Storage dispatching manages security of the storage facility by continuous monitoring operations; - Gas flow managing; - SSO requires the customer to submit and update the storage capacity use plan;- Inquiry for storage capacitiy froma customer and submitting the first guarantee				
SPAIN	CMPs are the same for every SSO. There are two procedures: 1. If during the first 6 months of the contract the capacity used is under 80% of the contracted capacity, the shipper/trader looses the part of the capacity that has not been used and the proportional part of the bail that is legally required before signing the contract.;2. If the Technical System Manager considers a shipper/trader has systematically underutilized capacity, and this fact is causing congestion in an infrastructure (access denials due to lack of capacity), the Technical System Manager will reduce the shipper capacity. The shipper/trader looses the capacity being underutilized and the proportional part of the bail that is legally required before signing the contract.; When the shipper/trader does not agree with loosing the capacity and the bail, it can complain to the CNE, which analyses if the capacity reduction complies with requirements established in the regulation.				

UK	CSL -Rough: "Use It Or Lose It" (UIOLI)/Secondary Market	SSE Storage Ltd: UIOLI			

2.5.4 How are the CMP made transparent to the storage customers?

Austria: published in general terms and conditions

Czech Republic: Each SSO publishes rules, prescribed by ERO in the abovementioned public notice, in its code which is publicly available.

Denmark: CMP procedures are subject to the overall legal requirement of transparency and non-discrimination in terms of tariff setting and access conditions. Also, storage companies have to publish their commercial terms for storage use once a year - and this would include CMP procedures.

France: The CMP are public rules

Germany: varying - typically online publication

Italy: Storage Access Code

Portugal: The congestion management procedures are approved by the NRA and published in the official journal and in the NRA and SSO's web pages.

Slovak Republic: published on the website with infomation for customers

Spain: They are approved by Royal Decree, so they are public

United Kingdom: Mainly through common contractual terms and the release of market information at or close to real time.

2.5.5 Have there been formal or informal complaints about the CMP applied?

1. Yes	3
2. No	7

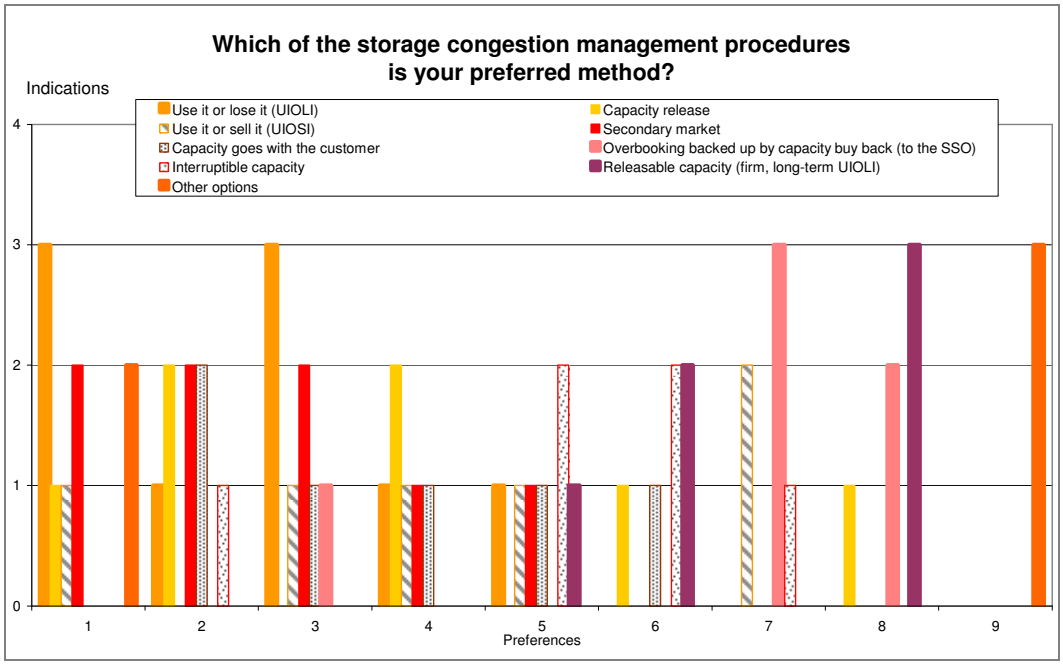
If yes, which ones?

Czech Republic: General comment is that the incumbent holds unnecessary capacity. The incumbent holds a majority of storage capacities and this fact is a subject of a legal case.

Spain: Following the procedure established iby Regulation to appeal to the CNE againts capacity reductions due to underutilization, the CNE have resolved some complaints.

2.5.6 Which of the below storage congestion management procedure is your preferred method? (Please rank from 1 to 9, 1 being the most preferred)

1. Use it or lose it (UIOLI)
2. Capacity release
3. Use it or sell it (UIOSI)
4. Secondary market
5. Capacity goes with the customer
6. Overbooking backed up by capacity buy back (to the SSO)
7. Interruptible capacity
8. Releasable capacity (firm, long-term UIOLI)
9. Other options , please describe:



2.5.7 Explain the reason for your first choice

UIOLI:

Slovak Republic: set by law

Capacity Release:

Germany: capacity hoarding can be effectively reduced by pragmatically and efficiently incentivising the selling of unused capacities incentives could be designed via hoarding penalties

UIOSI:

Austria: not used capacities have to be made transparent on an obligatory bulletin board

Secondary Market:

Spain: Secondary markets are considered highly important when promoting access to infrastructures and competition by most of the undertakings.

Others:

UK: Our preferred choice is dependent on the status of the facility. We consider it preferable that as much capacity as possible is made available to the market at all times.

2.5.8 Do you have any suggestions for improvements of the storage congestion management procedures?

Austria: More transparent secondary markets by obligatory bulletin boards

Spain: When there is systematically underutilized capacity and congestion, which means an important barrier for competition, firm and long term UIOLI should be applied.

UK: If a complaint was raised that the congestion management procedures were not working correctly we would investigate, which could subsequently lead to operational changes.

2.6 Secondary markets

2.6.1 Do you receive information on how much capacity is marketed on secondary markets?

1. Yes	5
2. No	7

If yes, which one?

Belgium: Available capacity, timeframe

Czech Republic: However, this piece of information is publicly available on the websites of SSO.

Denmark: Bulletin boards and regular meetings with storage operators.

France: Ex post information if any transaction on the Gaz de France DGI plattform.

Germany: access to common secondary trading platform store-x

Portugal: Presently all capacity is allocated in a short term basis (one year at most). On the other hand, a UIOLI mechanism would be applied in case of capacity allocated not used. This methodology is meant to avoid 'contractual congestion'. The implementation of secondary markets will be assessed in the near future.

Spain: Provions considered in Law 12/2007 regarding secondary capacity markets has not been developed yet. Undertakings can sell and by capacity but they do not report to the CNE on this operations

2.6.2 Have SSO voluntary developed a common platform (bulletin board) for secondary market, according to GGPSSO?

1. Yes	7
2. No	4

If no, why not?

Austria: OMV Gas, Wingas by Store-X

Estonia: There are no SSOs in Estonia

Italy: Stogit is implementing a new informatic platform for capacity trading

Spain: We understand the question is referred to "secondary CAPACITY markets" There is a platform in the spanish network IT system to sell and buy gas (secondary gas markets)

2.6.3 Is there a legal requirement for a common platform (bulletin board) for secondary trading?

1. Yes	4
2. No	8

If yes, which ones?

Belgium: Obligation imposed by Code of Conduct (rights and obligations for acces to the grid).

Italy: storage users sign a general condition access document

Slovak Republic: set by Ordinance No. 409/2007

Spain: Law 12/2007 establishes the need for regulating working conditions of secondary capacity market. This provision has not been developed yet

2.6.4 Have all secondary trades to be placed on this common platform?

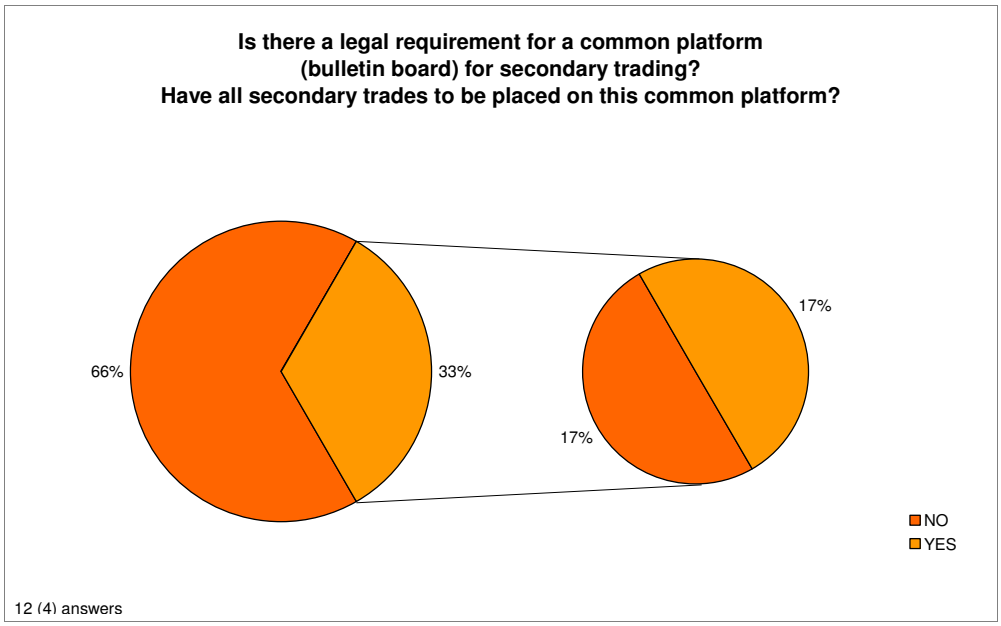
1. Yes	2
2. No	2

If no, why not?

Denmark: Not sure about scope of question. Bulletin boards are not obligatory but a means for facilitating secondary trade; made available by the storage operators on a voluntary basis and may be used/not used by storage customers.

Slovak Republic: it is not obligated by law

Spain: We understand the question is referred to "secondary CAPACITY markets". Law 12/2007 establishes the need for regulating working conditions of secondary capacity market. This provision has not been developed yet. Regarding gas markets, nowadays most of the operations (buying and selling gas, not capacity) performed by shippers/traders are on bilateral basis, and they do not use the platform.



2.6.5 Do you have any suggestions for improvements of secondary markets?

Austria: More transparent secondary markets by obligatory bulletin boards Incentive to sell not used capacities to avoid capacity hoarding
Spain: There should be a minimum of regulation on secondary capacity markets and harmonization among countries
United Kingdom: This could be achieved on an ex-post regulatory basis. If concerns were raised that the secondary market was not working correctly, Ofgem would be minded to investigate, which could potentially lead to enhancements to the operation of the market.

3 Questionnaire for SSOs

3.1 Statistical Data on Storage System Utilization

3.1.1 Data on storage facilities[13] 2007

29 SSOs

	Working gas volume mcm	Withdrawal rate cm/h	Injection rate cm/h
Technical capacity	51.378	34.056.094	18.356.948
Capacity for TPA	49.245	33.323.604	18.154.864
Contracted capacity	49.241	33.202.985	18.138.733
Available capacity	0,01%	0,36%	0,09%

3.1.2 Data on storage contracts

3.1.3 How is the storage capacity for TPA marketed?

1. Storage pool (virtual storage)	12
2. Each storage site separately	16
3. No answer	1

3.1.4 What kind of storage products do you offer? (multiple responses were possible)

1. Firm bundled services	27
2. Firm unbundled services	18
3. Interruptible bundled services	13
4. Interruptible unbundled services	20

3.1.5 Does the access of storage include access to transport?

1. Yes	5
2. No	23
3. No answer	1

3.1.6 Please describe how the tariffs are calculated?

Market based/negotiated:	23

[13] **Storage facility** means a facility used for the stocking of natural gas and owned and/or operated by a natural gas undertaking, including the part of LNG facilities used for storage but excluding the portion used for production operations, and excluding facilities reserved exclusively for transmission system operators in carrying out their functions (Definition 18 of the GGPSSO)

Regulated:	5
No answer:	1

If auctions apply is there any reserve price and how is it calculated?

Energinet.dk Gaslager A/S	Reserve price is set by the SSO at a level similar to last year's regulated price if the SBUs had been the same
Gaz de France Erdgasspeicher Deutschland GmbH	*The reserve price is calculated on the principle of minimal economics.*
E.ON Földgaz Storage Plc.	In case of overbooking annual firm capacities SSO applies selling storage capacities in bundles. SSO calculates the minimum bundle prices, which is equal to the summ of the regulated prices of the capacity elements of the bundle. SSO didn't applied auction yet.
Stogit Spa	Auction for unbundled extra withdrawal capacity with floor on cap prices based on regulated withdrawal tariffs, pro-rated for the offer duration
Edison Stoccaggio Spa	Auction are currently made for additional withdrawal rate during the Storage year: Additional rate requests are ranked accordingly to the value of parameter σ (multiplicative parameter for storage tariff fee) offered. Higher value of σ (maximum allowed value =2) are firstly served. In case of requests with the same value of σ, additional rates are assigned on a pro rata basis. Moreover, it is on approval by AEEG (NRA) the proposal to assign by auction the capacity eventually available, once the priority criteria for residential purposes had met. For any details, please see the Edison Stoccaggio Update Proposal for the Storage Code at http://www.edisonstoccaggio.it/pages/page.aspx?item_id=54. Our proposal settle that capacity offers are ranked in a decreasing way according to the value of the parameter ά. This is a multiplicative factor of the storage capacity charge defined by the Regulator. each user will pay the ά associated to his offer and aloha should be more or equal than 1
Enagas S.A.	There is no reserve price
Scottish and Southern Energy	reserve prices are calculated with reference to market prices prevailing at the time

3.1.7 Duration of Storage Contracts

28 SSOs have answered the next questions:	
Number of storage users	Total 186, average 6,6
Number of users who are affiliated companies	Total 33, average 1,8; 18% total
24 SSOs have answered the next questions:	
Percentage of total capacity belonging to contracts up to including one year duration	46% on unweighted average, referring to wgv 70%
Percentage of total capacity belonging to contracts more than one year duration	20% on unweighted average, referring to wgv 6%
Percentage of total capacity belonging to contracts more than five year duration	34% on unweighted average, referring to wgv 24%
26 answers:	
How much of the total capacity is booked by affiliated companies	62% on unweighted average, referring to wgv 54%

3.1.8 Date of next allocation of storage capacity because of availability:

34% of the SSOs gave no exact data.

Year	SSOs
2.008	4
2.009	11
2.010	1
2.011	1
2.012	1
2.013	0
2.014	1
ongoing process	7
n.a.	3
Total SSOs	29

3.1.9 Date of expansion of storage capacity:

52% of the SSOs gave no data for next expansion.

Year	SSOs
2007	2
2008	1
2009	4
2010	3
2011	2
2012	0
2013	2
2014	0
ongoing process	1
n.a.	14
Total SSOs	29

3.2 Storage Capacity Allocation Management

3.2.1 Please provide a description of the capacity allocation mechanisms and procedures you apply. Please specify if there is an order of priority and for which customers:

CAM	Number SSOs	corresponding wgv	Share in total wgv
FCFS	14	15.889	31%
CGWC	6	26.413	51%
Auction/pro rata	2	979	2%
Auction	2	3.636	7%
Pro rata	2	2.471	5%
No TPA	3	1.990	4%
Total	29	51.378	

Detailed answers:

Fluxys SA	Storage services are allocated in priority to shippers who supply gas distribution, prorate their market share as of Jan 4 of each year; a reallocation is carried out in Aug based on market share on July 1.
RWE Gas Storage	Since 17 July 2007, storage capacity is allocated on a pro-rata basis, i.e. when requests for storage capacity from users exceed available capacity, available capacity is divided among users in line with the volume requested. If the volume requested exceeds available storage capacity, the request is decreased to the available capacity.
DONG Storage A/S	Tender with pro rata reduction. TSO has priority as storage user
Energinet.dk Gaslager A/S	2008: Multi-round ascending clock auction + pro rata reduction. TSO has priority to storage in order to cover its legal obligations in terms of security of supply. In 2007, the TSO bought 82 mcm from the storage site.
TIGF	FCFS for the next 5 years + Storage right rules: According to the shipper's portfolio, storage capacities are re-allocated twice a year.
Gaz de France - Direction des grandes infrastructures	Pursuant to the French law 2003-8 of January 3, 2003, modified and completed by the law 2004-803 of August 9, 2004, the decree n° 2006-1034 dated August 21, 2006 organizes access to natural gas underground storage facilities 2006 according to a seven pri
Gaz de France Erdgasspeicher Deutschland GmbH	*until 2007: First commited first served. / from 2008: Auctions*
E.ON Földgaz Storage Plc.	Before the beginning of each storage year clients are required to provide the SSO with their capacity demand. Until no over demand exists, all capacity requests are fulfilled at regulated tariffs. In case the demand is higher than the available capacity,

Stogit Spa	Allocation priority order established by NRA: 1- strategic: importers from non UE countries; 2- balancing: network operator; 3- upstream: national producers; 4- modulation: "residential customers" needs (for normal and exceptioneal weather conditions); 5-
Edison Stoccaggio Spa	Italian Government D.Lgs 164/00 and AEEG ordinances 119/05 and 50/06 have settled the CAM priority in order to guarantee: firstly storage for strategic purposes, secondly the TSOs balancing needs thirdly production purposes forthly modulation of residential.
NAM	pro rata since 2007 - no priority for costumers
Enagas S.A.	- 42 Mcm3(n) [500 GWh] are booked for the SSO as residual balancing gas. - 1952 Mm3 (n) are allocated in the following way: 1st) An amount of underground storage capacity equivalent to 10 days of last-year's firm sales (to all the market) will be considered.
Scottish and Southern Energy	Standard Bundled Units of storage capacity are auctioned in sealed bid, pay-as-bid-auctions. Sold SBUs are allocated to bids in descending bid price order until all capacity has been allocated.

3.2.2 How often did you apply the capacity allocation mechanisms and procedures in 2006 and 2007?

Year	Responses SSOs	Total number	On average
2006	22	199	9,05
2007	27	164	6,07

3.2.3 How much capacity did you sell by the CAM in 2006 and 2007?

	Working gas volume mcm	Withdrawal Rate cm/h
2006	22,99	17.501.243
2007	44,029 26 SSOs; 91% of the capacity of the 26 SSOs for TPA	22.341.579, 27 SSOs 68% of the capacity of the 27 SSOs for TPA

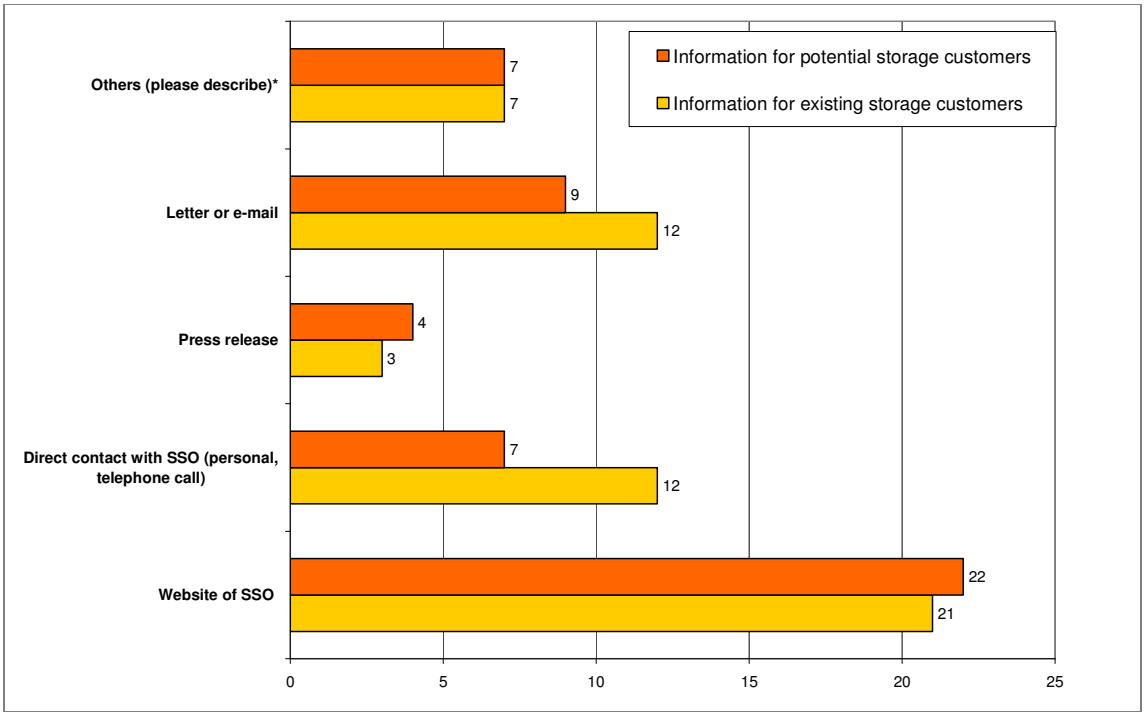
3.2.4 Who developed the capacity allocation mechanisms and procedures for storage? (multiple responses were possible)

NRA	6
Government	5
SSO	21

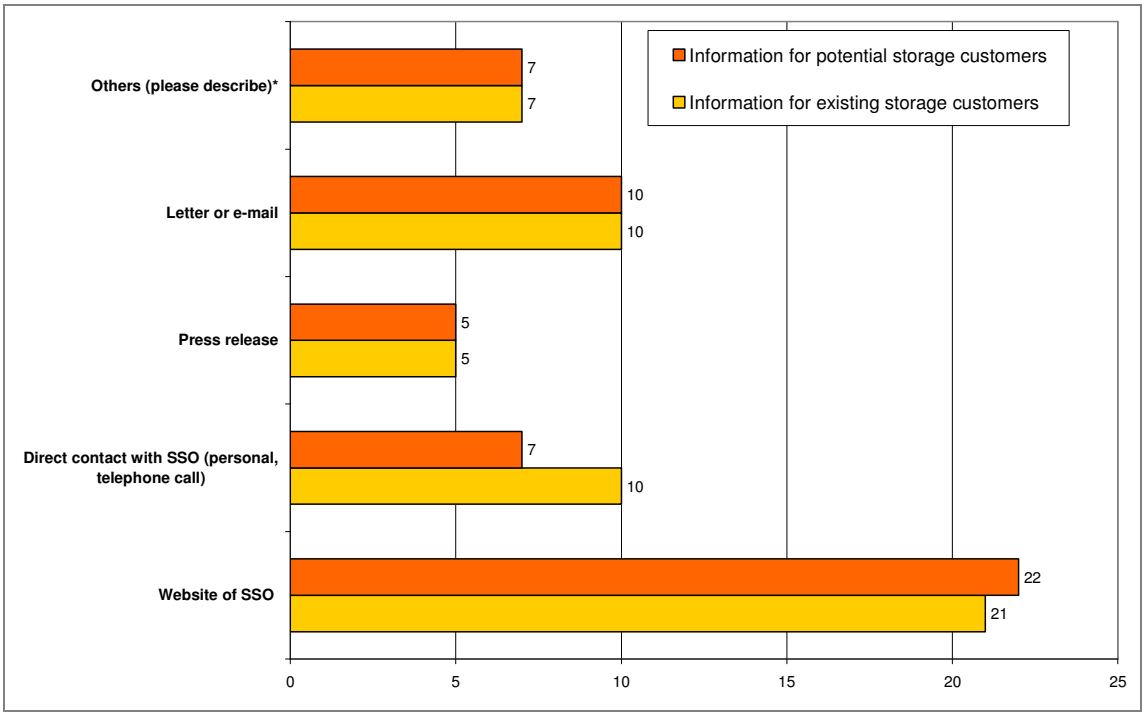
3.2.5 If you as a SSO developed capacity allocation mechanisms and procedures, whom did you involve in this procedure?

NRA	4
Government	0
Storage customers	17

3.2.6 How do you inform (potential) storage users about of the capacity allocation mechanisms and procedures you apply?



3.2.7 How do you inform (potential) storage users about available capacity?

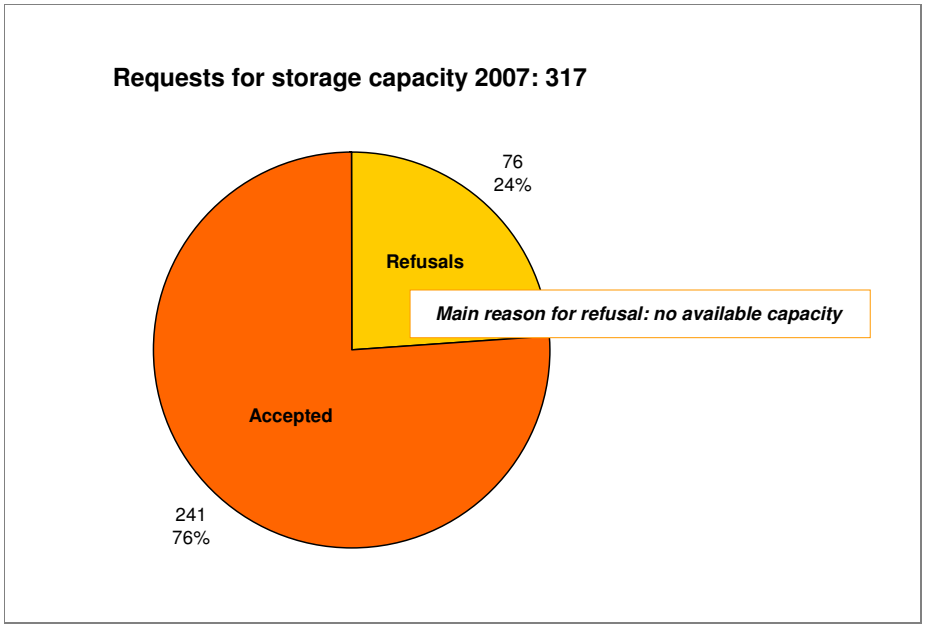


3.2.8 How many requests on storage capacity did you receive in 2007?

3.2.9 How many of these requests on storage capacity did you refuse?

3.2.10 Please indicate the reasons for the refusals

Answers for 1.2.8, 1.2.9 and 1.2.10 are summarized in the following graph:



3.2.11 How do you assure that the capacity is allocated in a non-discriminatory and transparent way?

RAG	Through the publication on internet (www.rohoel.at) and according to the Open Subscription and First come first served principles
OMV	first come first served, publication of capacities (technical cap., available cap. Committed cap. Utilised cap. Utilisation rate) for the future and the past via web based IT-tool (OCB) in realtime, strict internal processes and rules, all contracts are s
Fluxys SA	Storage services are allocated in priority to shippers who supply gas distribution, prorate their market share as of Jan 4 of each year; a reallocation is carried out in Aug based on market share on July 1
RWE Gas Storage	By following the allocation mechanism set out by the NRA for all storage users. Implementation of GGPSSO including publication of information on CAM and on technical and available storage capacities and implementation of a formal Code of Conduct.
DONG Storage A/S	Tender + pro rata
Energinet.dk Gaslager A/S	Auction. All information is provided to all customers at the same time. Prior dialogue with NRA and consultation with customers.
TIGF	Design of the allocation rules by the Government
Gaz de France - Direction des grandes infrastructures	Answer of the SSO is correct
EON Ruhrgas	there is no discrimination, as all customers are treated equally
E.ON Hanse AG	Implementation of a compliance programme, supervised by a Compliance Officer.
BEB Speicher GmbH	first come - first serve, information of available capacity is given to the market in the same way
Bayerngas GmbH,	Sale via independent internet plattform store-x on first commited first served basis.
Wingas GmbH	documentation of incoming requests with time stamp
E.ON Avacon AG	there is no discrimination, as all customers are treated equally
Gas-Union GmbH	All informations (e.g. free capacity) are available on the website. Incoming storage requests are handled, answered and documented in a non-discriminatory way.
RWE Energy AG and Kavernenspeicher Staßfurt GmbH	equal treatment of requests and anti-hording procedure in line with GGPSSO
E.ON Thüringer Energie AG	Gleichbehandlungsprogramm mit Überachung durch Gleichbehandlungsbeaufttragtem (Implementation of a compliance programm supervised be a compliance manager
Dea AG	equal treatment of requests and to work on the basis of GGPSSO
Essent Energie Gasspeicher GmbH	Storage has been built for own use/portfolio optimalization, but available/extended capacity will be available to the market on non-discriminatory terms and conditions
E.ON Földgaz Storage Plc.	SSO publishes all storage capacities on the website of SSO and provises booking process and capacity allocation method for potential customers. Allocation procedure is supervised by the NRA and all debated issues are discussed with the NRA.
Stogit Spa	Applying storage code provisions. Storage Code has been approved by NRA

Edison Stoccaggio Spa	D. Lgs 164/00 itself and further AEEG delibere ensure transparency and a non discriminatory treat-ment regarding CAM and COM. All rules are published and included in the storage code approved by the regulator. No negotiated contracts and services are in place.
Enagas S.A.	All the CAM and COM procedures are approved by the Regulator in consultation with the SSO and the storage users. Applicable CAM and COM are defined within the current regulatory framework and published on the Official Gazette (B.O.E.) by the Regulator. Furthermore, the SSO is an independent private company without any interest in production and/or supply/marketing. The tariffs and conditions are totally publicly available and transparent. The level of transparency is very high and is set up by the regulation (r-TPA).
Scottish and Southern Energy	the auction process allocates capacity to bids in strict descending price order

3.2.12 Have you implemented transparent market-demand assessments for expanding storage capacity (e.g. open season)?

RWE Gas Storage	We have prepared an open season procedure and await changes to the Market Model Decree by the NRA which would allow open seasons/auctions of storage capacity.
Energinet.dk Gaslager A/S	Open Season is under review
TIGF	Not yet, but we think about it for our next expansions
Gaz de France - Direction des grandes infrastructures	An Open Season was launched in 2007 to expand the Trois-Fontaine depleted field (in order to fulfill Gaz de France's commitments to the European Commission regarding the Gaz de France / Suez merger).
EON Ruhrgas	SSO have been asked by costumers directly for more capacities
BEB Speicher GmbH	open season processes prepared, but not yet applied because no expansion planned
Bayerngas GmbH	The current expanding storage capacity has been planned since 1999
Gaz de France Erdgasspeicher Deutschland GmbH	Yes. (Auctions)
RWE Energy AG and Kavernenspeicher Staßfurt GmbH	yes, continuous consultation with (potential) storage customers
Dea AG	Yes, continuous consultation with (potential) storage costumers
E.ON Földgaz Storage Plc.	Open season is not applied yet, developments are based on NRA and SSO forecasts.
Stogit Spa	NRA does not allow any open season
Edison Stoccaggio Spa	There is not a procedure as strictly defined but each of the two SSO in cooperation with users, TSO, AEEG and MSE (Ministero Sviluppo Economico) is involved in market assessment and estimate of long term demand in order to carry out their Investment Plan
Enagas S.A.	Yes, a Government Investment Mandatory Planning for Basic Gas Infrastructures. To assess new capacities (how much new capacity must be built), a Government Mandatory Planning process is launched. This ten year investment plan for basic gas infrastructures (UGS, LNG and high pressure network) is drafted every 4 years after a long and detailed consultation process, launched by the NRA, which involves all market stakeholders. It is updated every two years. This plan establishes the basic gas infrastructures which must be built for the next 10 years for an efficient and effective functioning of the Spanish gas market (taking into consideration as well security

	criteria). Once new capacity is built, it is allocated in the same way than the existing one.

3.2.13 How could the use-it-or-lose-it principle be developed in an appropriate way for gas storage?

RAG	The usage of our storage depends on the weather, it is not possible for the SS predict which capacities will not be used. An UIOLI is not possible to develop for sto capacity allocation.
OMV	OMV Gas will introduce the following mode in Q2 2008: non nominated capacities are displayed on web based IT-Tool (OCB) the day ahead, customer has the possibility to use "click&store" (web based IT-tool that enables the customer to conclude contracts online and operate them within a few hours) and buy capacities on an interruptible basis.
Fluxys SA	Re-use of non-nominated injection and withdrawal capacity according to the provisions for the transport network
RWE Gas Storage	In consultation between SSOs, NRA and storage users. Today: Withdrawal or injection capacity which has not been nominated should be sold on an interruptible basis. Future: stricter criteria hard to define.
TIGF	day-ahead for withdrawal and injection capacities only.
Gaz de France - Direction des grandes infrastructures	In accordance with the recommendations of the Guidelines for Good TPA Practice for Storage System Operators, Major Infrastructures Division of Gaz de France offers, since 1 April 2006, a Day-Ahead Ser-vice with which a Customer of a given Storage Group can use non-nominated injection and non-nominated withdrawal capacities of this specific storage group. "Day-Ahead" capacities are offered on an interruptible basis in order to give priority to potential intra-day renominations related to firm capacity. For each Storage Group, the daily request by way of the Day Ahead Offer consists of a quantity re-quested for injection or for withdrawal and an unitary price associated by the Customer. Day-Ahead quantities are daily distributed : - on a best offer basis, - on a prorata basis in case of identical prices associated with quantities and if the total request for that price exceeds offer.
Bayerngas GmbH,	When capacity contracted under existing storage contracts has not or hardly been used over several years and contractual congestion occurs, the SSO shall primarily consider to submit a request to the relevant capacity holder for the use of the secondary market for unused capacity and ultimately have the right to temporarily take away the capacity right from the relevant capacity holder unless the capacity is needed to meet fluctuating demand.
Wingas GmbH	We are convinced that the UIOLI -principle in our general terms and conditions for storage access is fully in line with the customers needs and the given legal framework. The feedback of our customers as well as of our potential customers proofs that.
Gaz de France Erdgasspeicher Deutschland GmbH	No influence on the storage-use by the client
RWE Energy AG and Kavernenspeicher Staßfurt GmbH	not appropriate because of security of supply functions of storage customers
Dea AG	not appropriate precisely because of the security of supply function of storage customers
Essent Energie Gasspeicher GmbH	The most important question would be what available/unused capacity is. if this is properly defined, the interested parties should discuss the most efficient practise
E.ON Földgaz Storage Plc.	No use -it-or-lose-it principle applied in special formulas. For mobile capacities SSO defines the injection program, and in case a shipper does not follow it, SSO can apply different sanctions. In case of peak capacities the non-used capacities

	are available for other shippers on an interruptible basis..
Stogit Spa	Through interruptible capacity
Enagas S.A.	In Spain, a permanent UIOLI including bails (financial guarantees) is in force. The UIOLI applied is a permanent backwards UIOLI including bails . This means that if one shipper has not used at least 80% of his capacity during the following six months after having signed the contract, he will lose permanently the unused part of his capacity including the proportional part of his financial guarantee (bails). Additionally if the System Technical Manager (Enagas) sees that one shippers is permanently misusing part of his capacity, then, Enagas is allowed to reduce the misused contracted capacity to that shipper and to take the proportional part of his bails.
Scottish and Southern Energy	there is an efficient UIOLI-mechanism in place in the GB market

3.3 Congestion Management Procedures

3.3.1 If there is a physical congestion, please provide a description of the CMP you apply.

	Number SSOs	corresponding wgv
Pro rata	12	21.956
Interruption of interruptible contracts	4	2.946
Interruption of interruptible contracts, pro rata	1	1.830
FCFS	1	4.077
interruptibles, pro rata, UIOLI, secondary market	1	439

3.3.2 If there is a contractual congestion, please provide a description of the CMP you apply.

CMP	Number of SSOs
Interruptibles	4
Pro rata	2
Auction	1
UIOLI	1
Secondary markets	1
Capacity release	1
FCFS	1
CGWC	1
Combined CMP	
Auction/tender, pro rata	2
Auction, pro rata; interruptibles, UIOLI, secondary market	2
FCFS, CGWC	1
FCFS, auctions	1
CGWC, pro rata	1
Pro rata, secondary market	1
auction, UIOLI	1
Other answers	
No CMP	1
no contractual congestion	1
n.a.	6
total SSOs	**29**

CMP are mostly used in combination.

3.3.3 How often did you apply the congestion management procedures in 2006 and 2007?

2006	
2007	

No consistent data: not applicable, once a year,

3.3.4 How much capacity did you release by the CMP in 2006 and 2007?

	Working gas volume mcm	Withdrawal Rate cm/h
2006	n.a.	n.a.
2007	n.a.	n.a.

Or

	Working gas volume Million kWh	Withdrawal Rate kWh/h
2006	n.a.	n.a.
2007	n.a.	n.a.

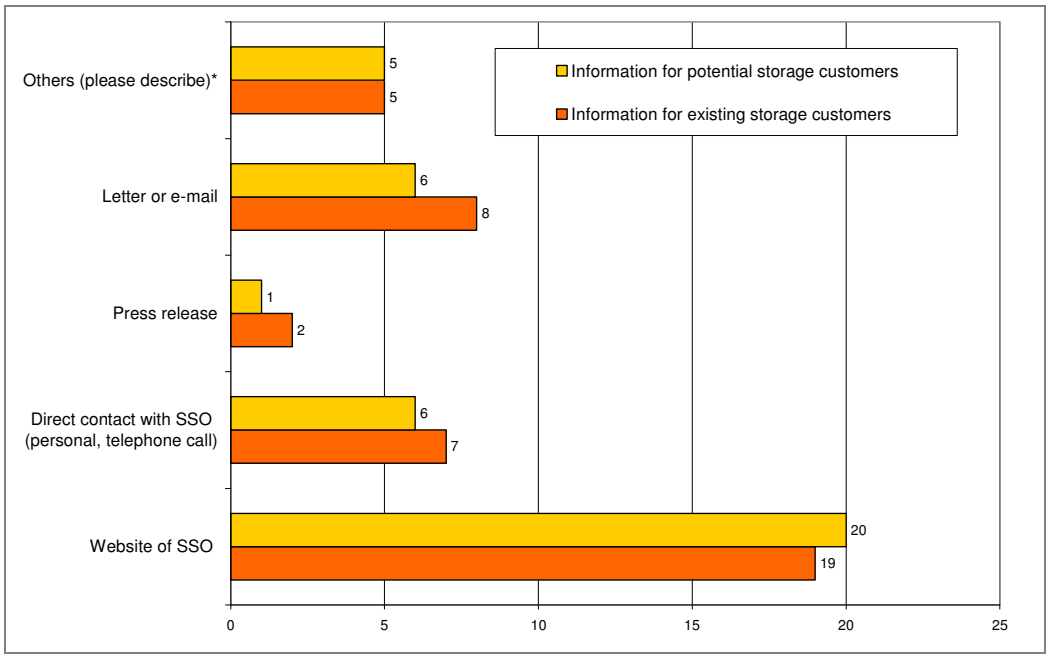
3.3.5 Who developed the CMP for storage (multiple responses were possible)

NRA	6
Government	3
SSO	20

3.3.6 If you as a SSO developed CMP, whom did you involve in this procedure?

NRA	2
Government	1
Storage customers	14

3.3.7 How do you inform (potential) storage customers about the CMP?



3.4 Secondary Markets

3.4.1 How do you facilitate secondary market trading?

→ **Bulletin Board/Electronic plattform:**

Fluxys, Scottish and Southern Energy, DONG Storage A/S, Energinet.dk Gaslager A/S, Stogit, RWE Gas Storage, Eon Földgaz, GdF, Bayerngas, Gas Union, OMv Gas, Gaz de France Erdgasspeicher Deutschland GmbH, RWE Energy AG and Kavernenspeicher Staßfurt GmbH,

→ **Email Plattform:**

NAM, RAG

→ **Store-x:**

Eon Ruhrgas, BEB, Eon Hanse, Eon Thüringer Energie AG, Wingas, Eon Avacon, E.ON Thüringer Energie AG, RWE Energy AG and Kavernenspeicher Staßfurt GmbH,

→ **Other exchanges:**

Enagas, Essent

3.4.2 How much of your total storage capacity (in percent) was traded on secondary markets in 2007?

Capacity traded (withdrawal rate)					
0%	< 25%	25% - 50%	50% - 75%	75% - 100%	100%
14	9	0	0	0	0

Capacity traded (injection rate)					
0%	< 25%	25% - 50%	50% - 75%	75% - 100%	100%
12	7	0	0	0	0

3.4.3 Is there a legal requirement for a common platform (bulletin board) for secondary trading?

1. Yes	5
2. No	21
If yes, which ones?	Store-X

3.4.4 Have all secondary trades to be placed on this common platform?

1. Yes	4
2. No	17
If No, why not?	No answers

3.4.5 Do you have any suggestions for improvements of secondary markets?

RAG	An improvement in the booking system of transportation capacities would facilitate the secondary market for storage capacities+EB2
Gaz de France - Direction des grandes infrastructures	It appears highly relevant to Gaz de France DGI to reinforce the cooperation between SSOs and adjacent operators (TSOs) when setting up secondary markets.
EON Ruhrgas	Store x is well developed and recommended
Wingas GmbH	we recommend store-x
Scottish and Southern Energy	There is no legal requirement for a common GB-wide platform, but secondary trading of Hornsea storage capacity is facilitated through our own bulletin board.