

## Task Force Storage

### Amendments Proposed by EFET, 23<sup>rd</sup> June 2004

# Guidelines for Good TPA Practice for Storage System Operators (GGPSO)

Version 02-06-04

### **Scope and objective of the GGPSO**

The GGPSO are forward looking and should be flexible enough to account for developments in market arrangements. They intend to give a minimum common set of requirements for the organization of the storage facilities and operators. They are addressed **primarily** to all operators of storage systems falling under the scope of Article 19 of the European Directive 2003/55/EC (Gas Directive). ~~as well as to the users of these systems.~~

**The purpose of these GGPSO for TPA to storage is to ensure that Storage System Operators (SSOs) provide the services needed by storage users on a fair and non-discriminatory basis and that the systems and processes promote the sustainable development of competition in gas supply.**

~~It shall be incumbent upon the SSOs, on a case by case basis, to demonstrate to the relevant national authorities that arrangements at storage facilities meet the following guidelines. in terms of the desired outcomes, or that the desired outcome is already achieved by the market. It shall also be incumbent upon the SSOs to demonstrate to the relevant national authorities if any of the following guidelines are not necessary to ensure fair and non discriminatory access to storages. As part of any such process there should be sufficient consultation with potential storage users and new market entrants regarding the disapplication of certain guidelines in order to assist the regulators in determining whether or not such outcomes are already achieved by existing market arrangements. The regulatory authorities should check that results in both regimes (nTPA and rTPA) are equal in terms of non-discrimination, transparency and competition.~~

~~If line-pack provides a significant amount of system flexibility needed for balancing by system users, then these guidelines should also apply to the operator of line-pack. Operators of storage reserved for PSO should also be subject to these guidelines.~~

**The guidelines include useful guidance on information provision (section 6) applicable to all SSOs** but the document need not apply in full to those storage facilities that the Regulatory Authority has agreed are not subject to TPA (e.g. small, non-essential facilities or exempted under Art. 22).

~~Users and Storage Operators are encouraged to work together to create innovative products (e.g. new ways in which storage can be used and/or offered). Any innovation needs to be made transparent to the market.~~

~~The choice between regulated and negotiated TPA is outside the scope of these guidelines, but it is pertinent to recall that regulated TPA should be required unless it can be proven that~~

there is sufficient competition. In any event, **these guidelines apply in both regulated and negotiated TPA regimes**, although significant differences in pricing and tariff structures are set out in section 7.

Because of market power, or legacy contractual arrangements, in some Member States the guidelines may need to apply to:

- operators of virtual storage and/or;
- primary capacity holders (even if they do not physically operate the storage facilities).

An overriding principle is that **storage systems and processes implemented by the SSOs maintain secure, reliable and efficient (Art 8.1 (a) of the Gas Directive) operation of the system, whilst facilitating the development of national and EU competition in gas supply.**

## **1. Roles and responsibilities of Storage System Operators**

- 1.1. ~~Storage system operators (SSOs)~~, be they separate entities, part of a combined operator in the sense of Article 15 of the Gas Directive, or part of a vertically integrated company in the sense of Article 2(20) of the Gas Directive, shall act in accordance with the principle of non-discrimination, transparency and competition. They are responsible for the provision of adequate technical storage capacity, **services and information as well as** ~~and~~ the technical integrity and safety of storage facilities.
- 1.2. **The SSO must be sufficiently separate from any affiliated supply companies to ensure non-discrimination.** In practice this means that the Storage Operator should be a legally separate company with separate management, buildings, accounts and an effective compliance programme.
- 1.3. The minimum role of a SSO involves that:
  - a. the SSO shall operate, maintain and develop under economic conditions secure, reliable and efficient storage facilities, and, **for rTPA**, sufficient long-term investments;
  - b. the SSO shall provide the information required by storage users and system operators as stated in Art. 6 on transparency requirements;
  - c. the SSO should co-operate with TSOs in order to ensure efficient and secure operation of storage and transportation networks;
  - d. the SSO shall redeliver stored gas to the interconnected system at a specification that complies with the entry requirements of that system;
  - e. **the SSO shall offer third party access services on a non-discriminatory and transparent basis to all storage users requesting access to storage, including own affiliated companies**, either using standard storage contracts or a common storage code, developed by proper consultation with users and overseen by the regulatory authorities at the national level. **Storage users with existing contracts shall be treated as any other party requesting storage and shall not enjoy any preferential treatment;**

- f. **the SSO shall consult with potential storage users on the products they are offering**, the method of sales and any changes to contracted services. The SSO shall aim at accommodating market demand on a non-discriminatory basis, without imposing barriers to customer supply and to trade, granting efficient and competitive access to the system;
- g. the SSO shall establish rules on the use of capacity aimed at ensuring competitive and efficient use of that storage facility by system users, as well as maintaining security of supply. In order **to prevent storage capacity hoarding, with particular regard to related undertakings**, the SSO shall have the authority to offer interruptible access, including UIOLI, to incentivise storage users to avoid hoarding;
- h. the SSO shall compensate users for any or failure to deliver nominated quantity;
- i. **the SSO shall provide users a financially firm service and avoid exposing users to undue risks (i. e. risks beyond the users' control)**;
- j. the SSO shall calculate the technical and available storage capacity inline with transparency requirements;
- k. the SSO shall offer the services allowed by the technical features of each infrastructure, **ensuring that the storage capacity available to potential users is maximised**;
- l. the SSO shall give response to storage capacity requests according to best practice. SSOs must endeavour to give on-line confirmation of bookings in real time. Until on-line systems are set up, the response time should be no more than 24 hours;
- m. put in place any arrangements necessary to facilitate their obligation to maintain the storage inventory balance.

## 2. [Role of Storage Users

N.B. This section is an anomaly and would be best DELETED. Each point (if relevant) would be a matter for the storage contract or storage code)

2.1 A storage user is a customer of a SSO and would sign the relevant store code or enter into storage contracts with SSOs for storing gas. Storage users may include, but are not limited to, ~~end-use~~ final customers, ~~suppliers~~ **supply undertaking**, ~~shippers~~ **wholesale customers**, traders and TSOs, ~~on condition to the extent~~ that it is necessary for the TSOs **and DSOs** to carry out their functions. Storage users shall, amongst others:

- a. be responsible for making nominations to the SSO(s), for **the injection** and withdrawal of gas from storage facilities in accordance with prevailing contractual specifications, technical rules and agreed procedures;
- b. provide all data required **that is necessary for the SSO to carry out their duties as SSOs** in the storage code and/or in the ~~transmission~~ storage contracts with ~~TSOs/SSOs~~;
- c. if asked for by SSOs, provide appropriate guarantees with respect to their creditworthiness. These guarantees must not constitute any undue market entry barriers and must be non-discriminatory, transparent and proportionate;

- d. **aim to** not use capacity rights in a manner that ~~may, or~~ is intended to restrict, distort or prevent competition, for example through capacity hoarding.]

### **3. Necessary TPA services**

- 3.1. Storage capacity not excluded from TPA pursuant to Article 2(9) of the Gas Directive when technically and economically necessary for efficient access to the network shall be offered to third parties on a non-discriminatory basis that promotes competition and facilitates trade. Therefore, ~~apart from production and operational needs, the SSO shall offer to third parties the maximum available storage~~ (i.e. technical storage capacity), ~~apart from that part of the storage solely used for transmission or production needs if functional to the market. Excluding a portion of the storage capacity from TPA~~ pursuant to Article 2(9) shall not be a decision of the SSO, and ~~should be approved~~ **shall be subject to approval by relevant national regulatory authorities.**
- 3.2. **Primary services should have been put in place by 1<sup>st</sup> July 2004** (to comply with the Gas Directive) **and must be implemented by SSOs at the earliest possible date.** Whilst all these services apply both to regulated and negotiated TPA, more flexibility will be needed in the case of negotiated TPA to make sure that storage services are applied in line with the market requirements and the developing competitive situation.

~~The amount of storage capacity needed for PSO and security of supply, while potentially set ex-ante, is offered on a TPA basis; requirements of non-discrimination and anti-hoarding mechanisms still apply.~~

- 3.3. **Any market participant should be able to buy storage** i.e. restrictions must not be placed on access to storage, linked to evidence of supply to end customers.
- 3.4. The SSO shall offer to third parties the storage capacity in a form that promotes competitive, non-discriminatory, and efficient access to best meet storage users' needs and that facilitates trade in storage services in secondary markets. Specifically SSO shall offer, pursuant to its responsibilities under § 1, ~~and taking into account technical constraints,~~ a menu of services, including the following:
  - a. bundling and unbundling of space and injectability/deliverability with determined technical ratios; bundled (SBU) and unbundled services should be offered in the primary market **and the secondary market**, taking into account the operational constraints of the storage **but in a way that ensures all capacity is brought to market. Due to technical constraints on the use of storage, the SSO should facilitate the trading of unbundled services on the secondary market, to ensure enough flexibility for access to storage;**
  - b. offer a sufficient range of both long-term and short-term firm services down to a minimum period of one day. The proportion of long-term contracts concluded may need to be limited where this hampers competition and market development;
  - c. **any storage capacity not sold under point a should continue to be offered on a rolling basis to market;**
  - d. **firm and** short term interruptible services, including "use-it-or-lose-it" arrangements as required under §5.

- 3.5. SSOs must consult with users and potential users on the products they are offering, for method of sales etc. and any changes to contracted services.
- 3.6. **Contract terms shall be transparent and non-discriminatory** (contract durations, fixed/indexed pricing).
- 3.7. **The SSO shall offer a guaranteed firm service, with nominations kept whole so that what is nominated is allocated, subject to Force Majeure.**
- 3.8. **Until the SSO has guaranteed to allocate the exact quantities nominated by users, the SSO shall at least provide firm allocations, within the TSO's balancing period.**
- 3.9. **SSOs shall offer services that are consistent with efficient use of the interconnected gas transportation systems** and facilitate easy access to/from/within the adjacent transmission system.
- 3.10. Title and risk should be clear and consistent with best practice in the interconnected network.
- 3.11. Taking into account technical constraints, the SSO shall offer all services without restrictions on the starting date and the actually prevailing physical flow. With the same constraints, injection and withdrawal of gas should, in principle, be possible at any time (**e.g. Netting, injection and withdrawal should be allowed**). Subject to technical constraints, limits on the required minimum size of storage capacity rights shall be proportionate and permit small shippers to gain access to storage services. Storage users should be allowed to pool their contracts with each other with a view to overcome potential technical capacity thresholds. There should be no restrictions based on historical patterns (e.g. storage user to inject in winter and withdraw in summer).
- 3.12. Renomination times must match market participants' requirements, subject to physical constraints.
- 3.13. The SSO should develop on-line information systems and electronic communication to provide adequate data to storage users **in a timely manner or, where required, on a real time basis** and simplify transactions (such as nominations, capacity booking and transfer of capacity rights between storage users).
- 3.14. SSOs should co-operate with administration of tax processes related to users' use of that storage service/facility.
- 3.15. Deadline for the implementation of such requirements is 1 April 2005; if SSOs have problems in implementing all of the measures envisaged under §3, they shall provide an explanation to the relevant national authority setting out the problems in implementing by this deadline and a concrete action plan as to when implementation will be possible.

#### **4. Storage capacity allocation and congestion management**

- 4.1. The SSO should have freedom to design the marketing process, with due consideration for users requirements, which could be via bilateral trades, auctions and/or published tariffs. The SSO must inform all users of new contract structures/processes. The SSO must demonstrate to the regulatory authority that this process is carried out in a fair and non-discriminatory manner.
- 4.2. Storage capacity allocation mechanism and congestion management procedures shall:
- facilitate the development of competition and liquid trading of storage capacity and be compatible with the market mechanisms including spot markets and trading hubs while being flexible and capable of adapting to evolving market circumstances **and discourage hoarding**;
  - take into account the integrity of the system concerned as well as security of supply;
  - not create undue barriers to market entry and shall not prevent market participants, including new market entrants and companies with a small market share, from competing effectively;
  - ensure the maximum **availability** and efficient use of technical storage capacity **in a non-discriminatory way**;
  - generate the right signals for investment in new infrastructures;
  - be subject to consultation with storage users.
- 4.3. **Once a nomination has been made by a user and accepted by the SSO, the SSO must allocate exactly the nominated quantity to that user, subject only to Force Majeure.**
- 4.4. **SSOs should encourage and facilitate secondary markets for storage services to ensure the maximum use of technical storage capacity (Art. 9).**
- 4.5. **Information on any reduction in capacity (whether firm or interruptible) must be provided as near to real time as possible on a non-discriminatory basis.**
- 4.6. In case of demand congestion, pro-rata mechanisms may be considered as an alternative to auctions. Non-discriminatory, market-based solutions shall be applied by the SSO or by the regulatory authorities, where appropriate. Alternative allocation procedures may only be considered where they ensure equivalence in terms of non-discriminatory and competitive access. Moreover, the **SSO shall actively endeavour to discourage storage capacity hoarding and facilitate re-utilisation and trade of unused storage capacity (e.g. day-ahead release of non-nominated injectability and deliverability)**. Specifically, capacity allocation mechanisms shall:
- appropriately balance the portion of storage capacity contracted under multi-annual long-term contracts and short term contracts;
  - make all storage capacity available**(if necessary by auction with a zero floor price) **in an appropriate range of bundled and unbundled units** and at least on an interruptible basis day ahead.

- 4.7. If, in spite of the measures aimed at preventing any commercial incentives to hoard capacity, namely secondary market and interruptible storage services, capacity contracted under existing storage contracts remains unused and significant and prolonged contractual congestion occurs, the competent authorities may require the SSO to introduce additional mechanisms to free up this capacity<sup>1</sup>.
- 4.8. SSO should use available tools to provide a short-term virtual service to users in the event of any failure of the facility.
- 4.9. In any case, provisions of § 4.2 should not prevent customers from changing suppliers at any time in the year.

## **5. Confidentiality requirements**

**5.1 The SSO shall meet the confidentiality provisions** of Article 10 of Directive 2003/55/EC, **by guaranteeing that:**

- a. **commercially sensitive information from storage users' accounts remains confidential.** Any information available to the SSO concerning its storage and processing business is not passed to other possible parts of the group in advance of being provided to all market participants; staff working for the affiliate business if any (e.g. supply) should have no access to information which could be commercially advantageous, such as details on actual or potential storage users, and is not made available to all market parties. **The arrangements to implement this requirement should include a code of conduct for staff/compliance programme, supervised by a Compliance Officer.** The SSO and the supply business should be located in separate building, provided such a measure is proportionate given the size of the activity concerned. In any case, staff working for an affiliated business must not have access to any parts of the building where confidential and/or commercially sensitive data is held by the SSO;
- b. arrangements should be put in place in order to instil confidence that access to information will not be abused by affiliate companies. These measures are necessary to ensure non discrimination between storage users;
- c. **in case of an integrated company operating production and storage business** and when there are no separate database systems, specific confidentiality duties must be clearly defined. The relevant national regulatory authorities ~~must~~*may at least require sufficient evidence from companies concerned so as to prove an effective establishment of Chinese walls between the SSO and the supply branch of the vertically integrated companies*<sup>2</sup>. The arrangements to implement this requirement **should include a code of conduct for staff/compliance programme, supervised by a Compliance Officer**, which

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<sup>1</sup> For the avoidance of doubt, such mechanisms are not intended to permanently withdraw capacity rights from storage users that retain capacity rights (e.g. injectability/withdrawal) as part of normal and economic use of storage facilities but rather the key emphasis is to ensure that the right mechanisms are in place to give incentives to users to sell capacity at times when they don't need to use it but others would place a value on such access.

<sup>2</sup> As stated in the CEER Recommendations on Implementation of TPA to Storage and Linepack, approved by the CEER General Assembly on 5<sup>th</sup> of December 2003.

should embody the principles behind the Chinese walls concept. The SSO and the supply business should be located in separate building, provided such a measure is proportionate given the size of the activity concerned. **In any case, staff working for an affiliated business must not have access to any parts of the building where confidential and/or commercially sensitive data is held by the SSO.**

## **6. Transparency requirements**

**Core requirements for annual and monthly information should already have been in place by 1<sup>st</sup> July 2004** (for minimal compliance with the Gas Directive). Weekly, daily and, where appropriate, within day information should be made available as soon as possible, ~~but with a final target date of 1<sup>st</sup> July 2005.~~

- 6.1. **SSOs should implement user-friendly systems to publish the real time information needed by storage users in a timely manner in national language and in English on the Internet.** Information should be provided on a real time basis, unless not required by system users. Information shall be disclosed in a meaningful, quantitatively clear and easily accessible way and on a non-discriminatory basis.
- 6.2. Information relating specifically to a user's account must be kept confidential and information must be provided promptly and on the same time scale as to any other storage user (including the SSO's affiliate).
- 6.3. **There must be transparency in all TSO and SSO rights and processes** (e.g. TSO pre-emptive rights for carrying out their duties).
- 6.4. The following commercial terms should be published **to the market and updated as relevant at least on a daily, monthly, quarterly or annual basis in a user-friendly, with online information systems and as required on a real time basis: and more regular, where such terms are updated.** In the case of nTPA, information on the main services provided and main commercial conditions should be made public:
  - a. **in rTPA, the charges for each service offered** (GGP2, § 5.1, letter a) and storage penalties **or compensation to storage users** should be published ex ante with the derivation criteria attached (i.e. *the underlying technical and economic reasons for establishing them*). **In nTPA, the prices for core services (i.e. standard products) must be published and updated whenever the SSO changes the prices offered to any customer.** Regime price and underlying criteria should be made available to the national regulatory authorities at least in case of disputes; the same applies to storage penalties;
  - b. **in rTPA**, services offered, the storage code (if applicable) and/or the main standard conditions for each service outlining the rights and responsibilities for all users ~~including flexibility tolerances (e.g. for inflows and outflows, the possibility of counter flows during injection or withdrawal)~~ and the rules of transfer storage capacity in case of customer switching. **In the case of nTPA, information on the main services provided and main commercial conditions, including the current basic prices, should be made public;**
  - c. method of determining available storage capacity and the operational parameters including transparency on the rules of ownership and use of working gas;



- d. storage capacity allocation, congestion management and anti-hoarding and re-utilization provisions, including auctions terms where applicable and rules applicable for storage capacity trade on the secondary market vis-à-vis the SSO;
  - e. the rules applicable for storage capacity trade on the secondary market vis-à-vis the SSO;
  - f. the rules applicable to storage penalties and other compensation by the SSO.
- 6.5. The following operational information should be published (in energy units, according to interoperability criteria) on a daily basis **and as required on a real time basis**, to enable system users sufficient and timely information in order to gain effective and efficient access to storage facilities:
- a. **Storage level plus** technical, booked and available storage capacity (firm and interruptible where applicable);
  - b. the level of cushion and working gas;
  - c. **current daily aggregated inflow and outflows and historical utilization rates**;
  - d. user-friendly, **on-line** instruments for calculating charges for a specific service (e.g. tariff calculator) and for verifying on-line the level of available capacity, including net and available firm and interruptible capacities and any storage reserved for security of 'supply'. Capacities shall be updated if necessary on a within day basis;
  - e. maps indicating the location of their storage facilities and the connecting points of the storage facilities to the relevant network;
  - f. the rules (if any) of transfer of storage capacity and injection and withdrawal capacity in case of customer switch.
- 6.6. **At least the provisions of § 6.4.e. and § 6.5.a, b, c and e shall apply also to any storage capacity not required to provide TPA according to Article 19 of Directive 2003/55/EC or any other storage facility connected to a transmission system and for which there is no TPA.**
- 6.7. Notwithstanding the requirements of this GGPSO, SSOs shall ensure that any other **information that any SSO has that might significantly affect market prices shall be released to the market** and any potential market abuse is avoided.
- 6.8. **The SSO should publish at least once a year, by a predetermined deadline, all planned maintenance periods** that might affect storage users' rights from storage contracts and the corresponding operational information with adequate advance notice. Where unplanned disruptions in access to the storage facility occur, the SSO shall ensure system users are notified of that disruption as soon as possible. During maintenance periods, the SSO should publish regularly updated information on the details of and expected duration and effect of the maintenance. SSO should maintain and make available to the regulatory authority upon request a daily log of the actual maintenance and disruptions that have occurred. Information shall also be made available on request to those affected by any disruption.
- 6.9. Storage users shall not be separately charged for information requests and transactions associated with their contracts according to standard rules and

procedures (e.g. nominations). Extraordinary expenses for requests not linked to general SSO's roles and responsibilities and transparency requirements can be separately charged.

- 6.10. Provide information on gas quality requirements for injection.
- 6.11. Provide information on the quality of gas redelivered to the interconnected network.
- 6.12. Publish information on development projects and their impact on operations.
- 6.13. ~~Marginal storage facility may be exempted by the national regulatory authorities from certain transparency requirements if this creates an undue burden not proportionate to the size or importance of the facility in question. (see Art. 6.6)~~
- 6.14. **SSOs should aim for full compliance with these provisions by 1 April 2005;** if SSOs have problems in implementing all of the measures envisaged under §6, they shall provide an explanation to the relevant national authority setting out the problems in implementing by this deadline and a concrete action plan as to when implementation will be possible.

## **7. Tariff structure and derivation**

- 7.1. **SSOs should have commercial freedom to design fair and non-discriminatory tariff structures. In rTPA, these tariff structures will be subject to regulatory approval.**
- 7.2. Where negotiated, **SSOs should not adopt any charging principles and/or tariff structures that would restrict market liquidity of storage capacity**, create undue barriers to market for new entrants, cross-subsidies between system users or hamper system enhancements and integrity. The parties involved should negotiate in good faith, avoiding long response times and discrimination and abuse of market power. **Once the SSO has offered a negotiated price, this price must be available to any other third party. One way the SSO can achieve this is by publishing and continuously updating their price offers.** Pursuant to Article 19 of the Gas Directive, in case of disputes, the relevant regulatory authority shall determine appropriate third party access arrangements. The SSO shall maintain records to enable the regulator to determine costs of provision and prices already levied on other users of that facility for the similar services. **Also, in nTPA regimes, charges should:**
  - a) **be non-discriminatory; tariffs should be the same for any storage user for the same service contracted for at the same time;**
  - b) promote efficiency and competition in the use of storage services;
  - c) provide for appropriate incentives on new investments where necessary;
  - d) not imply long negotiations and shall avoid discrimination and misuse of market power. Once determined the first time, they should equally apply to all storage users, only subject to adaptations/changes on the grounds of varying circumstances.

**7.3. Where regulated, tariffs structure of the SSO should:**

- a. **reflect efficiently incurred costs** of access to storage facilities, both in the case of direct access to a specific storage and access to virtual storages; tariff structure needs to reflect the geological nature of storage as they should be cost reflective (e.g. efficiently incurred costs are not the same for aquifers and depleted gas fields);
- b. **facilitate competition and avoid cross subsidies** between storage users;
- c. promote efficient use of storage;
- d. promote adequate and efficient investments only when necessary;
- e. be clear, transparent and reviewed on a regular basis taking into account developments in the market;
- f. where appropriate, international benchmarking of tariffs may be taken into account and applied in non discriminatory manner. Regulators should provide price comparisons with other SSOs.

7.4. Regulated SSOs should consult with users and regulators on construction of tariffs, demonstrate to the regulatory authorities that the proposed tariffs comply with any relevant price controls and deliver fair and non-discriminatory access.

7.5. Where there is insufficient competition for good price discovery, the SSO should publish average prices.

7.6. The application of tariff methodologies shall be such that national regulatory authorities may re-examine, on a case-by-case basis, the choice of regulated TPA and implement negotiated TPA for a particular storage facility to account for market developments, specifically where sufficient competition for flexibility services is secured<sup>3</sup>.

**8. /Storage penalties**

N.B. This section is best DELETED. The commercial remedies or penalties on SSOs and users would be established via the provisions of the storage contract or code.

8.1. Storage penalties may be established to ensure that storage operators and users respect their contractual obligations in particular to ensure they nominate and use storage consistent with the capacity rights they have procured either on the primary or secondary market.

8.2. Storage penalties shall:

- a. provide for compensation to be paid by the SSO to the storage user in the event that the SSO fails to fulfil contractual obligations, as set out in the storage code/contract;

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<sup>3</sup> See footnote 2

- b. apply if the SSO delivers more gas than the storage user nominated. The SSO shall compensate the storage user for any costs incurred by the storage user resulting from the overdelivery by the SSO;
  - c. apply if the SSO delivers less gas than the storage user nominated, then the SSO must compensate the storage user, at the value of the short fall.
  - d. ~~be designed in a non-discriminatory and transparent manner, based on objective criteria;~~
  - e. ~~be aimed at ensuring the safe functioning of storages and where necessary, to ensure that PSOs are met;~~
  - f. ~~facilitate effective competition and not hamper the entry of new participants into the market;~~
  - g. ~~ensure that the SSO remains broadly cost neutral: penalties collected by SSOs, over and above the actual efficiently incurred costs, shall be redistributed to the storage users on a non-discriminatory basis, any costs that cannot be targeted should be allocated back to users in a non-discriminatory manner.~~
- 8.3. When needed, national regulatory authorities should ensure compatibility of storage penalties with transmission balancing regimes.]

## **9. Market based mechanisms such as secondary market**

- 9.1. Secondary Services should be established by the SSO as soon as practical, with a target date of 1<sup>st</sup> April 2005.
- 9.2. The SSO shall allow and facilitate bundled and unbundled services to be freely tradable between registered shippers in a secondary market without any undue restrictions and develop standardised contracts and procedures on the primary market to facilitate secondary trade and recognise the transfer of rights where notified by storage users. **Once the market develops within-day trading of unbundled capacity should be supported. SSO should co-operate with users making requests related to the development of a secondary market** SSO must allow the new owner to aggregate such storage capacity with its existing storage capacity operationally.
- 9.3. The way secondary market operates should be simplified by the existence of a standardised storage contract or a storage code approved by the regulator or, **for nTPA, just at least** subject to regulatory oversight. There should be the opportunity for storage users and the SSO to propose modifications to this contract/storage code through time.
- 9.4. Where requested ~~and paid for by~~ storage users, SSOs shall provide ~~cost-reflective~~ **effective** services (such as an electronic platform or bulletin board) to facilitate secondary storage capacity trading and associated transfer of storage capacity rights between storage users.

## **10. Cooperation with TSOs**

- 10.1 The SSO should co-operate with TSOs in order to ensure that both systems:

- a. provide services consistent with those offered by the adjacent TSO and required so as to ensure the efficient use of the interconnected transmission system;
- b. render operational procedures, such as nomination, compatible with those of the adjacent TSOs;
- c. ensure re-nomination procedures match market participants requirements;
- d. ensure consistency in matching relevant storage arrangements with the balancing requirements of the adjacent transmission system.

### **Annex: Definitions**

1. Aquifers is an underground water reservoirs, suitable for storage if the water-bearing sedimentary rock formation is overlaid by an impermeable rock cap.
2. Available storage capacity means the part of the technical storage capacity that is not **contracted, PSO or TSO** allocated and is still available to the storage users **to contract** at that moment.
3. Cushion gas means the minimum technical volume of gas intended as permanent inventory in a storage reservoir to maintain adequate pressure and deliverability rates throughout the withdrawal season.
4. Deliverability is 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, 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.
5. Depleted fields are exhausted gas or oil fields.
6. Firm storage service refers to a contract for firm storage capacity.
7. Flexibility is the availability of gas and/or capacity (transmission, storage, LNG capacity) needed to: adapt supply to foreseeable volume variations in demand and to adjust the erratic fluctuations of demand; exploit market opportunities with the market opening to competition, i.e. using different combinations of flexibility tools in order to achieve cost advantages or enjoy new market businesses; comply with public service obligations and strategic objectives.
8. GGP2 are the Guidelines for Good Practice approved by the Madrid Forum in September 2003 for TPA to transmission.
9. Injectability is 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.
10. Interruptible storage service refers to a contract for interruptible storage capacity. The contract 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.
11. Line pack means the storage of gas by compression in gas transmission and distribution systems, but excluding facilities reserved for transmission system operators carrying out their functions (Directive 2003/55/EC).

12. Marginal facilities are storage sites considered not economically necessary for efficient access to the system pursuant to Article 19 of the Gas Directive.
13. Nomination means the prior reporting by the storage user to the SSO of the actual flow that he wishes to inject into or withdraw from the system.
14. Peak-shaving means a storage service meeting short-duration peak demand.
15. Pseudo-working gas is part of working gas, which is not withdrawn in order to have greater deliverability.
16. Production means gas delivered via an upstream pipeline as defined in Gas Directive 2003/55/EC.

~~Producer means a company that extracts gas from an onshore or offshore field and delivers it to a terminal~~

17. Primary Market means the market of the storage capacity traded directly by the Storage System Operator.
18. Primary storage market means the market of the storage capacity directly traded by the SSO.
19. PSO means Public Services Obligations.
20. Re-nomination means the reporting of a corrected nomination.
21. Regulatory authorities are the bodies as defined by Article 25(1) of the Gas Directive.
22. Salt cavities are developed in underground salt formation by a leaching process.
23. SBU means Standard Bundled Unit. Storage capacity may be sold in SBUs, which gives customers the right to withdraw, inject 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...).
24. Secondary market means the market of the storage capacity traded otherwise than on the primary market.
25. Storage capacity is the maximum space (expressed in normal cubic meters or energy) and flow (expressed in normal cubic meters or energy per time unit) to which the storage user is entitled in accordance with the provisions of the storage contract. Storage capacity refers to space, injectability and deliverability. All of them can be firm or interruptible.
26. 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 (Directive 2003/55/EC).
27. Storage penalty is the additional charge a storage ~~system operator user~~ has to pay after ~~delivering using more or less than a storage user's bona fide nomination allocation~~.

- 28.** Storage System Operators are those companies that exercise commercial **or physical** control over the storage service, for example by holding the monopoly capacity rights for a storage facility.
- 29.** Storage user (or a shipper) is a customer of a SSO that would sign the relevant storage code or enter into contracts with SSOs for storage of gas. Storage users may include but are not limited to producers, suppliers, traders, shippers and end users and TSOs.
- 30.** Technical storage capacity is the maximum storage capacity that the SSO can offer to storage users, on firm basis, taking into account the system integrity and the operational requirements of the storage infrastructures. It is determined by the physical characteristics of the reservoir and installed equipment.
- 31.** Total gas in storage means the volume of gas stored in the underground facility at a particular time.
- 32.** TPA services means Third Party Access Services. TPA to storage is either regulated (rTPA) or negotiated (nTPA).
- 33.** TSO means transmission system operator.
- 34.** UIOLI means Use-it-or-lose-it. Sale of storage capacity that is not used by firm storage capacity holder.
- 35.** Unbundled storage product means that space, injectability, deliverability can be traded separately.
- 36.** **Unused Storage Capacity means that part of the Available Storage Capacity, plus that part of the Contracted Storage Capacity that has not been nominated for use.**
- 37.** Virtual storage means a storage service sold in the form of traditional storage product, but not directly linked to a physical storage. A supplier may also use both physical storage and other flexibility tools as well as spot and other supplies and capacity margins resulting from a pool of customers in order to offer virtual storage.
- 38.** Withdrawal rate: see Deliverability.
- 39.** Working gas means the volume of gas in the reservoir above the level of cushion gas that can be withdrawn and re-injected.