

# **Amendment of the Guidelines of Good Practice for Third Party Access (TPA) for Storage System Operators (GGPSSO)**

## **Guidelines for CAM and CMP**

**Ref: C11-GST-15-03**  
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## INFORMATION PAGE

### Abstract

This CEER document (C11-GST-15-03) presents an Amendment of the Guidelines of Good Practice for Third Party Access (TPA) Storage System Operators in Gas (GGPSSO).

Following stakeholder feedback, CEER has drafted two revised guidelines, one for CAM and one for CMP, to be integrated in the existing GGPSSO.

### Background

In 2005, ERGEG published its Guidelines of Good Practice for Third-Party Access (TPA) for Storage System Operators (GGPSSO). These GGP were intended to give a minimum set of rules required for the organisation of the market for storage capacity and provide non-discriminatory access to TPA storage. The guidelines were directly related to the implementation of European Gas Directive 2003/55/EC, although in themselves they are not legally binding.

Following their adoption, the European Commission asked ERGEG to monitor the implementation of the GGPSSO. ERGEG undertook two monitoring exercises (in 2005 and 2006) on storage operators' compliance with the GGPSSO. The findings from these exercises showed that most storage facilities are congested and that competition between storage system operators (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.

Given these disappointing conclusions, in 2008 ERGEG established a dedicated task force for gas storage with the aim to give an overview of the current situation in different EU Member States on capacity allocation management (CAM) and congestion management procedures (CMP) for storage. Indeed, these issues are covered in the GGPSSO. ERGEG subsequently published two status reviews in 2008 and 2009. These reviews concluded that in many cases, the legal position of the national regulatory authorities (NRAs) does not provide for sufficient regulatory oversight to ensure a non-discriminatory and fair allocation of storage capacity. Meanwhile, the regulatory framework for the internal gas market changed with the introduction of the 3<sup>rd</sup> Package of energy liberalisation legislation in 2009 which required further considerations to be taken into account when defining CAM and CMP procedures. However, the 3<sup>rd</sup> Package rules alone were not considered sufficient to tackle the problems found in the ERGEG status reviews of 2008 and 2009. Therefore in July 2010, a public consultation was launched to enhance the existing GGPSSO and the amended GGP were published in February 2011. Following the presentation of the updated GGP provisions on CAM and CMP at the March 2011 Madrid Forum, European energy regulators committed to consider further fine-tuning of the GGPSSO, after consultation with stakeholders.

Following stakeholder feedback, CEER has prepared the following additional guidelines for CAM and CMP to be integrated in the existing GGPSSO. This amendment is supplementary to the 3<sup>rd</sup> Package and aims to ensure a level playing field from which market players will benefit. In general, without these additional provisions the market might remain as it is today for a long time; namely congested in some parts of the EU.

## Target Audience

Gas storage operators, energy suppliers, traders, gas/electricity customers, gas/electricity industry, consumer representative groups, network operators, Member States, academics and other interested parties.

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## Related documents

### CEER/EREG Documents

- Amendment of the Guidelines of Good Practice of Storage System Operators (GGPSSO), ERGEG, February 2011, Ref. E10-GST-14-04, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/Tab/E10-GST-14-04\\_GGPSSO-CAM-CMP\\_2-Febr-2011.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/E10-GST-14-04_GGPSSO-CAM-CMP_2-Febr-2011.pdf)
- Assessment of CAM and CMP for effective access to storage and proposals for the amendment of the GGPSSO, ERGEG, July 2010, Ref. E10-GST-09-06, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/CAM%20and%20CMP%20for%20effective%20access%20to%20storage/CD/E10-GST-09-06\\_CAM\\_CMP\\_storage\\_28-Jul-2010.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/CAM%20and%20CMP%20for%20effective%20access%20to%20storage/CD/E10-GST-09-06_CAM_CMP_storage_28-Jul-2010.pdf)
- Status Review 2009: Capacity Allocation Mechanisms and Congestion Management Procedures for Storage, ERGEG, April 2010, Ref. E10-GST-09-03, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2010/E10-GST-09-03\\_CAM-CMPforStorage-SR\\_clean.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2010/E10-GST-09-03_CAM-CMPforStorage-SR_clean.pdf)
- Status Review 2008: Capacity Allocation Mechanisms and Congestion Management Procedures for Storage, ERGEG, December 2008, Ref. E08-GST-03-03, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2008/E08-GST-03-03\\_CAM-CMPforStorage-SR\\_clean.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2008/E08-GST-03-03_CAM-CMPforStorage-SR_clean.pdf)

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- Final 2006 Report on Monitoring the Implementation of the Guidelines for Good TPA Practice for Storage System Operators (GGPSSO), ERGEG, December 2006, Ref. E10-GFG-20-10, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2006/E06-GFG-20-03\\_GGPSSO\\_MonitoringImplementation\\_2006-12-06.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2006/E06-GFG-20-03_GGPSSO_MonitoringImplementation_2006-12-06.pdf)
- Final 2005 Report on Monitoring the implementation of the Guidelines for Good TPA Practice for Storage System Operators (GGPSSO), ERGEG, December 2005, Ref. E05-STO-06-03, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2006/ERGEG\\_MONITORINGGGPSSO\\_2005-12-07.PDF](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2006/ERGEG_MONITORINGGGPSSO_2005-12-07.PDF)
- Guidelines of Good Practice for Third-Party Access for Storage System Operators (GGPSSO), ERGEG, March 2005, Ref. E04-PC-01-14, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2005/E04-PC-01-14\\_GGPSSO\\_2005-03-23\\_FINAL%20-%20March%202005.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2005/E04-PC-01-14_GGPSSO_2005-03-23_FINAL%20-%20March%202005.pdf)

#### External Documents

- Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/54/EC, <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0094:0136:EN:PDF>
- Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0036:0054:EN:PDF>

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## 1. Introduction

ERGEG<sup>1</sup> published the Guidelines of Good Practice for Third Party Access (TPA) for Storage System Operators (GGPSSO) in 2005. It included some guidelines on capacity allocation mechanisms (CAM) and congestion management procedures (CMP)<sup>2</sup>. Monitoring of the implementation of these Guidelines occurred in 2006 and 2007, followed by Status Reviews in 2008 and 2009. The results of these past surveys have provided a qualified basis for enhancements to the GGPSSO. In 2010, European energy regulators consulted with stakeholder (through a public consultation and a workshop) on an “Assessment of Capacity Allocation Mechanisms and Congestion Management Procedures for effective access to storage and proposals for the amendment of the GGPSSO.” As a result, in February 2011 ERGEG published an “Amendment of the GGPSSO,” which set out a series of guidelines for CAM and CMP to replace the associated chapter on these issues in the 2005 GGP. The present document represents a further revision to the provisions on CAM and CMP, following discussions with stakeholders at the March 2011 Madrid Forum.

This amendment document must be seen as supplementary to EU law regarding the 3<sup>rd</sup> Package. With these guidelines for CAM and CMP, CEER aims to ensure a level playing field which will benefit market players. In general, without these additional guidelines the market might remain as it is today for a long time; namely congested in some parts of the EU.

The amended GGP for CAM and CMP<sup>3</sup> for storage presented herein replace 2 sections of Chapter 4 “Storage capacity allocation and congestion management” in the 2005 GGPSSO. The additional GGP on CAM replace Chapter 4.1 and the additional GGP on CMP concern Chapter 4.2 of the GGPSSO.

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<sup>1</sup> With the entry into force of the 3<sup>rd</sup> Energy Package, ACER (the Agency for the Cooperation of Energy Regulators) became operational in March 2011 to fulfill its tasks. ERGEG was dissolved as of 1<sup>st</sup> July 2011. As gas storage issues are examined through CEER (the Council of European Energy Regulators), this document is published under the CEER banner.

<sup>2</sup> Ref. E04-PC-01-14, March 2005

<sup>3</sup> The indications “a, b, c...” used for the Guidelines in this report reflect the numbering from Chapter 4.1 and 4.2 of the 2005 GGPSSO, of which they should be considered an integral part.

## 2. Guidelines and Explanations

CEER would like to clarify that specific regulations in Member States (NRA) have been taken into consideration as regards the application of the GGP on CAM and CMP (as presented in this document). Furthermore, where a storage system operator (SSO) is not bearing the responsibility for allocating capacity and/or congestion management (as is the case in at least one country), then the responsible party should follow the guideline proposals as presented in this document.

*The numbering of the Guidelines below corresponds to that in Chapter 4.1 and 4.2 of the 2005 GGPSSO.*

### 4.1. Guidelines and Explanations on CAM

#### a. Transparency

**“Allocation of storage capacity shall be made transparent by detailed publication of timing, organisation (schedule) and aggregated results of applied allocation mechanisms on the internet in the local language as well as in English. If requested by users, English should also be used by the SSOs when communicating with (potential) storage users.”**

*In order to reach maximal market awareness and to ensure the principle of non-discrimination, SSOs shall publish at least on their website (and common marketing/trading platform(s)) in English and the local language the actual design of the capacity allocation mechanism, including a schedule for regularly applied allocations, the actual procedure and its timing as well as further conditions that may apply and the aggregated results of the process. In order to facilitate transparency, SSOs should provide, for example, the following information, for which the extensiveness depends on cost-benefit analysis/user consultations to find out user needs:*

- *Working gas volumes, firm and interruptible withdrawal and injection capacity for each storage facility on a daily and longer term basis (technical, commercialised, subscribed/booked, and available capacity);*
- *Historical interruption data/Historical flows/levels of utilisation at each storage facility;*
- *Planned maintenance operations as far ahead as possible;*
- *Nomination lead times for different capacity products (yearly, monthly, daily);*
- *Clear description of CAM and CMP in the contract terms, so that users are fully aware of their storage access rights and obligations;*
- *Calculation of tariffs;*
- *Contact details;*
- *Nomination lead times;*
- *Ancillary services offered;*

- *Clear information on the applied mechanisms, procedures and necessary steps to request storage capacity or trade capacity on secondary market;*
- *Methods and timing for allocating storage capacity, if under a “ storage rights envelope” giving access to available capacity;*
- *Overview of relevant regulations;*
- *Characteristics of storage groups;*
- *Detailed information provided to storage users in case of unplanned outages (affecting injection and withdrawal rate, impact on storage operation, duration of the disruption...);*
- *Day-ahead service for each storage group (withdrawals per quarter, minimum and maximum price; injections per quarter, minimum and maximum price);*
- *Documents and tools (storage agreement, tool system to help to determine/optimize the storage subscriptions, storage fee calculator...);*
- *Transfer of stored gas (number of registered exchanges, number of customers).*

**b. Consultation with market**

**“Allocation of storage capacity shall be subject to consultation with the market, e.g. concerning the actual design of the allocation mechanism(s).”**

*To accommodate market needs, well-structured regular consultations with actual and potential storage users regarding the actual design of the allocation mechanisms, i.e. auction design, are expected to be a beneficial instrument for the design of optimum allocation, although this does not imply that the design needs to be changed frequently.*

**c. Compatibility**

**“Allocation of storage capacity shall ensure, on a best-effort basis, compatibility (e.g. regarding timing/lead time) with the transport capacity allocation mechanism(s) of the connected TSO(s) and the organisation of the gas trading market(s). Consequently, this also requires the alignment of, at least, a basic set of storage and transport products (with regard to duration and lead time for regular allocation) that should be developed in cooperation between SSOs and TSOs.”**

*In order to facilitate a gas market, easy access to storage services is very beneficial. To prevent burdening storage customers when trying to organise related transport services, compatible allocation mechanisms therefore also require the alignment of (the definition of) storage products and transport products (with regard to contract duration and lead times for regular allocation procedures, allocation schedule) of connected TSOs and vice versa. Such an alignment requires SSOs and TSOs to cooperate together to identify the possibility (e.g. introduce floating contracts) and - if possible - define on a best-effort basis a basic set of storage and transport products. These products should be designed in such a way that they are exchangeable or interchangeable. It should be possible to commercialise these standard products on (electronic)*



*trading platforms. In the competitive flexibility markets, the design of CAM should also take into account the organisation of the wholesale and retail markets. More precisely, this implies that products (duration), organisation and timing of storage CAM should be compatible with the organisation of the gas trading market(s).*

**d. Combined products**

**“Allocation of storage capacity shall allow for the development of combined storage and respective transport capacity as one product.”**

*To further improve services for storage customers, the further development of compatible storage and transport CAM could be achieved by an integrated storage and transport product, to be developed and offered by SSOs. A combined storage and transport product should be offered if there is market demand for such a service, avoiding that an SSO would be forced to buy transport capacity on speculation. This would of course imply a close cooperation of the concerned SSO with the respective TSO(s) in the concerned balancing/market. The national regulatory authority (NRA) must be informed in a timely manner when an SSO has the intention to offer combined products.*

**e. Balancing market**

**“Allocation of storage capacity shall take into account the needs for balancing markets by offering services which support the balancing, by aligning nomination and renomination periods and procedures to the technical requirements of the physical balancing regime. If technically possible, lead times shall be shortened so that balancing gas can be taken from storage.”**

*Since storage services are often (sometimes even the only resource) used for balancing purposes, SSOs should make sure that the services offered contain, among others, standard products which are compatible with the balancing regime (both in terms of product definition and CAM).*

f. Open subscription period

**“Allocation of storage capacity shall start with a standardised, transparent, non-discriminatory survey that is fixed to a certain storage product in order to determine market demand for that storage product (open subscription period (OSP)). During the OSP, at least, SSOs shall provide all relevant information including specific storage product descriptions, contract durations and the conditions for the respective CAM(s) to be applied according to the results of the OSP to the potential customers. The SSO should consider providing price information to the potential customers, such as indicative prices. It is up to the discretion of SSOs whether the bids for the product are binding or not. The duration and timing of the OSP should be fixed and aligned to the duration of the respective storage contracts.”**

*An open subscription period (OSP) is a transparent process for evaluation of the demand for a specific storage product. An OSP should be fixed (i.e. for every product a recurring OSP is to be conducted, e.g. every year for a year product). The main aim is to determine the demand situation and in series the most efficient CAM. The allocation process shall always start with an OSP in order to ensure a transparent and non-discriminatory participation of all interested storage customers in the subsequent allocation procedure. The relevant information to be provided during the OSP (at least) must be easily accessible to potential customers and in a user-friendly manner. Furthermore, an SSO should consider providing price information (e.g. indicative price). Some of that data, which is unlikely to be modified over time, like product description, contract durations, general terms and conditions could also be published on a permanent basis. Timing of the OSP should be fixed and aligned to the contract durations.<sup>4</sup> When the OSP closes, SSOs have an overview of the storage capacity demand for the specific storage product.*

*Examples: The OSP of a standardised yearly storage contract (representing a calendar year “a”) should regularly last for example from 1.10. until 15.12. of the previous year (a-1), the OSP for a daily storage contract (for day “d”) from 10:00 – 11:30 the day ahead (d-1).*

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<sup>4</sup> "Fixed": timing provides sufficient time for storage users to contract storage services, ahead of the beginning of the contract. "Aligned to the contract durations": timing reflects the duration of the contract.

**g. CAM depending on result of OSP**

**“Allocation of storage capacity shall, with respect to the applicable mechanism, be determined by the results of the OSP:**

**1: If demand exceeds supply – and unless national legislation stipulates differently – auctions should be implemented for allocation of all of the capacity offered with this storage product or service in the preceding OSP. Necessary conditions for applying auctions should be in place (e.g. competition between bidders exists and absence of the possibility to strategically misbehave).**

**2: If supply exceeds or is equal to demand, allocation is straightforward.**

**Straightforward shall be understood as any reasonable non-discriminatory and transparent allocation principle which best considers the market conditions”.**

An OSP can lead to two different situations: i.e. demand exceeds offer or not. This provision aims at defining a harmonised approach on the CAM to be used to deal with these two situations:

1.) The market for the selected product is tight (demand > offer):

Only if there are no (other) national provisions on the regulatory treatment of storage capacity allocation mechanisms, shall CAMs be adjusted to fit market needs – sufficiently and simultaneously representing the best possible market-based mechanism. In such cases, as long as competition between the bidders and the absence of the possibility to strategically misbehave are assured (two important conditions when performing an auction) and an appropriate reserve price is in place, auctions should be implemented as the CAM of first choice, as such mechanisms are considered to be the most market-oriented and value-reflecting way of allocating (especially scarce) capacity.

In markets with specific national public service obligation (PSO) provisions on storage with respect to, for example, ensuring compliance with gas security of supply obligations, it is noted that SSOs may be required to use alternative allocation arrangements to those recommended in this section to meet those PSOs.

2.) The market for the selected product is not tight (demand ≤ offer):

If the market for the selected product is not tight (demand ≤ offer) allocation is straightforward. In such a case, allocation should take place via an objective, transparent and a non-discriminatory process. Alternatively, SSOs could use auctions, or some other allocation mechanism that provides a similar level of objectivity, transparency and non-discrimination to allocate the capacity.

## h. Monitoring of capacity allocation conditions

**“Before launching a new mechanism for allocation of storage capacity, an SSO shall offer to discuss the mechanism with its NRA.”**

*Article 17 of Regulation (EC) No. 715/2009 states that an SSO needs to “implement a non-discriminatory and transparent capacity allocation mechanism”. As such, it is the responsibility of an SSO to design the allocation mechanism. Based on Article 41(1) (section n) of Directive 2009/73/EC, a regulatory authority has the duty of “monitoring and reviewing the access conditions to storage” as provided for in Article 33. Furthermore, “in the event that the access regime to storage is defined according to Article 33(3), that task shall exclude the reviewing of tariffs”.*

*Regulators therefore have, at a minimum, the legal right to undertake an ex-post review of the allocation mechanism. If the allocation mechanism failed to meet the standards of non-discrimination and transparency, the consequence could be the invalidity of storage contracts, which seems to be an additional risk for both the SSO and, above all, the storage customers. CEER therefore believes that, to reduce this risk, SSOs should generally offer to discuss their proposals for any new CAM mechanism with the NRA at an appropriate time before launching the mechanism.*

## 4.2. Guidelines and Explanations on CMP

### a. Standardisation of Secondary Markets

**“SSOs should be responsible for the facilitation of secondary markets for storage capacity: the actual implementation/day-to-day operation can be outsourced to a third party. A web-based platform will be provided that enables primary customers (without restraining the possibility for bilateral agreements) to sell unused capacity on the secondary market. It should at least enable primary customers to make an anonymous offer (both bundled and unbundled storage capacity) that is visible to third parties. To foster standardisation, published master agreement templates are used. Furthermore, a lead time for the implementation/acceptation/registration of secondary trades is published. SSOs connected to the same balancing zones or market areas should cooperate (if possible) in the standardisation and consolidation of secondary markets to improve liquidity. The relevant NRA will be consulted in the decision making process. SSOs shall keep a record of all transactions on the secondary market. The collected information shall be communicated to the NRA on request.”**

*This provision aims to ensure that there is an effective platform available where storage customers can trade their firm capacity on a firm basis with other customers. Based on Article 22 of Regulation 715/2009, SSOs are to take reasonable steps to ensure and promote that capacity rights can be freely traded on a transparent and non-discriminatory way. As such, an SSO should therefore be responsible for facilitating the secondary market, but an SSO can choose to delegate the actual task of running day-to-day business, hiring people, build IT-systems etc. to a*

*third party. SSOs connected to the same balancing zones or market areas should cooperate in the standardisation and consolidation of secondary markets to improve liquidity. Given the complexity of such cooperation relevant NRAs should be involved in this decision making process. It is important that a secondary market exists for each storage facility (which is the aim of these GGP), but the higher aim should be that eventually a national platform is founded where all storage capacity in the market can be traded.*

*Bulletin boards may be a first step in facilitating secondary markets but a more sophisticated trading platform should be developed according to the market development.*

**b. Standardisation of Terms and Conditions**

**“The terms and conditions for access to storage and the processes for operating the secondary market and applying for interruptible products should be standardised, accessible in a timely manner to (potential) customers and published at least on the internet in both English and local language.”**

*This provision aims ensure that the content of storage contracts (including general terms and conditions) is known by (potential) customers who are interested in booking storage capacity. If these conditions are not known in a timely manner, a customer cannot make a good judgement whether it is (commercially) interesting to book storage capacity. Transparency is thus of utmost importance.*

*Given the fact that storage users in one internal market very often include international companies (that do not always have personnel that speak the national languages of all the storage operators of the EU), any information that is provided by an SSO should also be published in English.*

**c. Renomination and unused capacity**

**“A primary customer makes, at best effort, a timely nomination to the SSO on the capacity that will be used. An SSO will make best efforts to stimulate and facilitate primary customers to do so.”**

*This provision aims to make sure that SSOs have a clear sight on any capacity that is nominated by a primary customer. This will allow the SSO to make a timely and fair prediction of any “unused” capacity (that is marketable on an interruptible basis) so that potential customers can make a timely decision on whether they are interested in buying interruptible capacity or not. Such a timely and fair prediction can only be made by an SSO if primary capacity holders consider in a timely manner their **expected need** for gas flows/capacity utilisations (“timely meaning earlier than the latest possible official nomination time, usually one day before the gas flow day). A primary customer should therefore, at best effort, make a timely nomination (through an initial nomination), but the timing of the best efforts nomination should at least allow for a*

weekly preview to SSO on capacity use.

An example of stimulation could be to include a condition in contracts whereby non-binding nominations, on best effort basis, are requested from the user on monthly, weekly, and D-1 basis. This leads to mutual building of experience between users and SSO in management of optimum allocation of potentially scarce storage capacity.

#### d. Dynamic Capacity Calculation

**“Based on the nominations received and their own forecasts, SSOs shall strive to maximise the interruptible capacity products offer (at least on a day-ahead basis but preferably on a longer term basis), by dynamically calculating available capacity taking into account counter-flow nominations and information means available influencing capacity use. Based on dynamic calculations, SSOs may decide to perform a buyback of capacity if there is an actual need for this service and commitment of a user to contract this capacity immediately.”**

*This provision aims at maximising short term capacity offers to the market, because visibility of actually available storage capacity is better the closer the date and time of use is. It is expected that SSOs by experience have data regarding historical flow behaviour and that this information (among other information) can be used to make a prediction. This should both be in the interest of SSOs, who can maximise the selling of their services and users, who in turn can benefit from a higher availability of storage services at least on a short term basis (quarterly, monthly, weekly, daily).*

#### e. Optimal use of storage and corresponding products

**“SSOs will offer a reasonable amount of interruptible capacity on a (short) term and with a balanced mix of contract duration. Any unused capacity will be offered in both unbundled and bundled products on an interruptible basis. The design of products should be consulted with current and potential customers. The offered products should be market-based and take into account the needs of storage users but not be overly customised, so as to prevent “1 user only fit”. Any limitations in offering products should only be the result of legal, operational or technical dependencies.”**

*Through this provision, SSOs will offer any **unused** capacity to make sure that the storage capacity is optimally used and that the selling (and revenues) of any capacity is maximised. SSOs should offer both unbundled and bundled products (consisting of fixed proportions of injection capacity, working gas volume and withdrawal capacity) to ensure that market players can use storage. Offering bundled products may not always be possible e.g. due to legal (re-nomination rights) and/or operational/technical (stock level) dependencies. However, limitations in offering bundled products should only be the result of such legal and/or operational dependencies and products should not be customised to fit one user.*

**f. Information on non-nominated capacity**

**“Information on the amount of nominated storage capacity (on an aggregated level) should be provided by the SSOs on a day-ahead basis and the already sold day-ahead interruptible products. Similar best efforts should preferably apply to longer outlooks. The data should be published on a website in time series (both for unbundled and bundled services) preferably close to real-time. Also historical data on (non) nominated capacity should be published in order to make an estimate of the probability of interruption.”**

*By applying this rule, (un)bundled storage capacity that is not (yet) (re-)nominated on a short term basis will be made more transparent and therefore can more easily be accessed and used by third parties via interruptible capacity. This measure can help – only to a limited extent – to ease the problem of congestion, at least on a short term basis. Concerning publication of non-nominated capacity, it is preferable to update the data close to real-time, because re-nominations can occur at very short notice. Therefore, providing this information in time series (e.g. in a table with additional entries for every half hour) can give holders of interruptible capacity improved transparency on the value (probability of interruption) of their interruptible capacity products. The procedure in the event of an interruption of interruptible capacity, including, where applicable, the timing, extent and ranking of individual interruptions should also be published. Storage customers (being the users of the outlook), should be consulted by the SSOs in order to find a method to gain additional value in their decision making.*

**g. Transfer of Working Gas**

**“SSOs will make an effort to facilitate the transfer of working gas of the same storage facility between a primary and secondary customer at the start and end of the duration of the interruptible or firm (bought at secondary market) contract. In case of a working gas transfer, the price should ideally be market-based.”**

*A primary customer will already have a certain amount of gas-in-storage (working volume). Without a proper arrangement, this gas should first be retracted from the storage before the secondary customer can inject gas. Through this provision, a secondary customer is ensured that gas can be retracted immediately once the contract period starts (through a transfer of gas-in-storage). At the end of the interruptible contract, the customer might need to reinject gas, so the original user can start using storage immediately. Given its importance, the transfer of working gas should not bounce due to unreasonable high prices and an SSO can do its upmost to facilitate the transfer of gas in storage. The price in case of a transfer of working gas should ideally therefore be market-based.*

## h. Pricing methods

**“The price for interruptible capacity that a secondary customer should pay reflects the probability of interruption. Other pricing methods, incentivising active storage capacity use – like “auctions and pay as used” – can be used if storage prices are not regulated.”**

*Article 15 (2a) of Regulation 715/2009 states that the price for interruptible capacity is to reflect the probability of interruption. In addition, Article 1 of the same Regulation suggests that storage price principles are not harmonised. A customary option is to use a method where interruptible storage price contains a discount, reflecting the probability of interruption. Another option to promote active storage capacity use is to use the “pay as used” method, and the use of an auction (under the appropriate circumstances, determined by NRA) is also a possibility. In “pay as used” method the SSO is incentivised to create attractive products, which will be used, as SSO is only paid per withdrawn or injected commodity. In “auctions,” attractive congestion revenues can be generated.*

## i. Aggregation and overcoming technical constraints

**“In case a storage facility has a high minimal flow and/or other technical constraints for relatively small users, SSOs will use reasonable endeavours to aggregate customers’ nominations. If aggregated nominations – despite these reasonable endeavours – are below the minimal flow level, SSOs shall cooperate with TSOs to allow a customer to continue to use a storage facility by reasonable measures, taking into account the balancing mechanism applied.”**

*Customers who need to flow a small amount of gas will have difficulty to do so if the minimum flow is high. Through this provision, SSOs shall cooperate with TSOs to allow a customer to continue to use a storage facility by reasonable measures taking into account the balancing mechanism applied. An SSO (in the case of minimal flow and/or technical constraints) should do its utmost to continue offering its service to customers. This could be done in a number of ways (such as offering a virtual storage product backed up by multiple sources of flexibility or e.g. contracting access to linepack with adjacent TSO to overcome minimum flow constraints). It is up to an SSO to decide what measure is best practice in that respect.*