

Storage Specification Haidach 17/18

astora GmbH & Co. KG
Wilhelmshöher Allee 239
34121 Kassel, Germany

hereinafter referred to as "**astora**"

Contents

Article 1	Introduction	3
Article 2	Storage Service.....	3
Article 3	Exceeding Storage Capacities	3
Article 4	Tariff for Exceeding the Storage Capacities	4
Article 5	Operations.....	4
Article 6	Injection and Withdrawal Curves	4
Article 7	Delivery Points	5
Article 8	Natural Gas Quality Specifications	6

Article 1 Introduction

1. This **Storage Specification** completes the **Storage Services Agreement** and defines all the details required to enable **astora** to provide **Storage Services** in the Haidach **Storage Location** based on the **Storage Services Agreement** which will be concluded with regards to the Keyed Procedure held by **astora** on the PRISMA Capacity Platform on 17.02.2017.
2. For storage of **Gas** the **General Terms and Conditions for Storage Access**, the definitions for the storage of **Gas** contained in the **General Terms and Conditions for Storage Access** and §6 of the **Storage Services Agreement Haidach 2017** shall apply, unless this storage specification contains different arrangements. The terms used in the singular also include the plural and vice versa, assuming this has not been expressly agreed otherwise or is obvious from the respective situation.
3. Upon the conclusion of a **Storage Services Agreement** this **Storage Specification** shall be an integral part of the **Storage Services Agreement**. For this product the **General Terms and Conditions for Storage Access** shall apply with the exclusion of part four, part five and part six.

Article 2 Storage Service

1. The **storage service astora season** will be offered as **Bundled Storage Service**. The offer within the Keyed Procedure includes three hundred fourteen (314) bundles. The **Storage Service** has a term from 01.04.2017, (06:00 a.m.) to 01.04.2018, (06:00 a.m.).
 2. One (1) bundle shall comprise the following **Storage Capacities** on firm basis:
 - a) **Injection rate:** 3,000 kWh/h and
 - b) **Withdrawal rate:** 4,900 kWh/h
 - c) **Working gas volume:** 9,600,000 kWh

Article 3 Exceeding Storage Capacities

1. **astora** – going beyond its obligation pursuant to Article 6 until further notice – will endeavor to enable the **Storage Customer** to make use of additional injection or withdrawal rate, in case the contractual **Storage Capacity** is restricted by Article 6 due to the characteristic line. Such capacity use is granted free of charge on an interruptible basis up to the maximum booked capacity irrespective of Article 6.

2. In the event of interruption, still available (interruptible) capacities will be divided pro rata based on the nominated quantity among those customers whose **Storage Capacity** is exceeded.
3. For nominations exceeding the booked **storage capacities** and the capacity specified under number 1, the **Fee for Exceeding the Storage Capacities** applies.
4. The **Fee for Exceeding the Storage Capacities** will be calculated daily by using the **Tariff for Exceeding the Storage Capacities** according to the following Article 34 on the basis of the maximum hourly volume which exceeds 100% of the **Storage Capacities per Storage Day**.

Article 4 Tariff for Exceeding the Storage Capacities

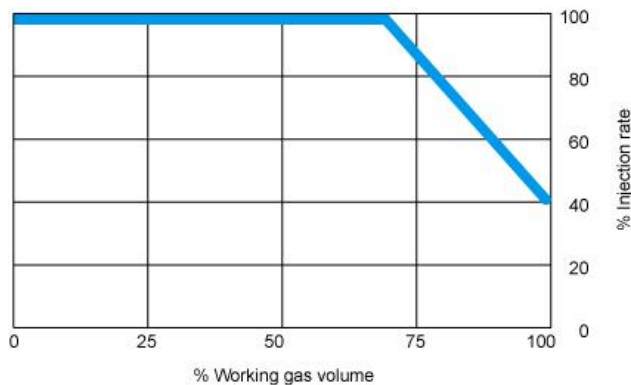
1. The **Tariff for Exceeding the Storage Capacities** shall be:
 - a) **Injection rate:** 2.8 ct/(kWh/h)/d
 - b) **Withdrawal rate:** 3.9 ct/(kWh/h)/d

Article 5 Operations

In the Haidach **Storage Location** the time required to process a **Renomination** shall be two (2) hours.

Article 6 Injection and Withdrawal Curves

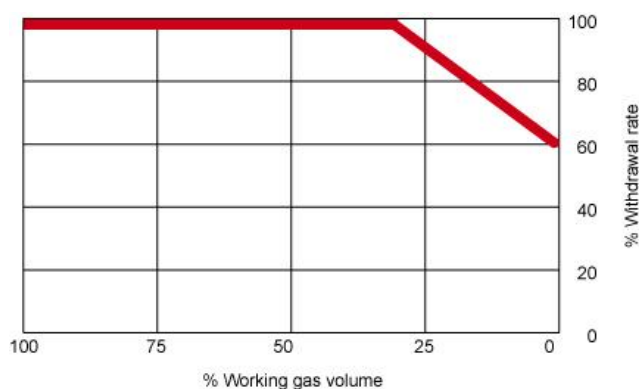
1. The usage of the **Storage Services** as per Article 2 is limited by the **Injection and Withdrawal Curves**.
2. The **Injection and Withdrawal Curves** of the Haidach **Storage Facility** assumed shall apply herein in combination with the **Storage Services** as per Article 2 and also for the corresponding **Storage Services Agreements**.
3. If a percentage of the stored **Working Gas Volume** as per Sections 4 and 5 should be reached, **astora** may lower the **Injection** or **Withdrawal Rate** to the percentage specified according to Sections 4 and 5.
4. The **Injection Curve** shows the **Injection Rates** as a function of the **Storage Customer's Working Gas Volume** which it shall be entitled to use.



The available **Injection Rates** of the **Storage Customer** (IR) in case a **Customer's Storage Level of Working Gas Volume** (WGV) exceeds 70% shall be calculated as follows:

$$IR [\%] = WGV [\%] \times (-2) + 240$$

- The **Withdrawal Curve** shows the **Withdrawal Rates** as a function of the **Storage Customer's Working Gas Volume** which it shall be entitled to use.



The available **Withdrawal Rates** of the **Storage Customer** (WR) in case a **Customer's Storage Level of Working Gas Volume** (WGV) falls below 30% shall be calculated as follows:

$$WR [\%] = WGV [\%] \times 1.3333 + 60$$

Article 7 Delivery Points

- The **Point of Injection** and the **Point of Withdrawal** of the **Storage Location** correspond to the entry-/exitpoint "USP Haidach" of the **Neighbouring Natural Gas Network** operated by Bayernets GmbH, Munich (Netpoint-ID entry: BAY-700069-8021-1, Netpoint-ID exit: BAY-700069-8021-2).
- The **Allocation Procedure** in Haidach shall be declaratory.

Article 8 Natural Gas Quality Specifications

For the Haidach ***Storage Facility*** at the ***Delivery Points*** listed in Article 6 hereunder the values of DVGW G 260; 2nd gas family shall apply with the exception of the following parameters:

Carbon dioxide (CO₂) ≤ 2 mol%