

CDIS Manual

for

Gas Storage Bergermeer Customers

Table of Contents

1. Scope of this Manual.....	1
2. Setup instructions.....	1
3. Access and use.....	1
4. B2B system communications.....	2
5. Contingency Procedures.....	3
6. MyGSB Manual.....	3

Appendix A – Setting Up MyGSB

1. SCOPE OF THIS MANUAL

- 1.1 The CDIS (Customer Data Interface System) Manual provides operational and technical instructions to Storage Customers on how to set-up, access and use the customer data interface “MyGSB”, which forms part of the CDIS, in order to: access user data; process and monitor Secondary Trades; and use back-up processes if the automated systems interface fails.
- 1.2 Conditions of using CDIS as described in the SSSA and the Operating Guidelines are applicable to the use of MyGSB. In case provisions of this CDIS Manual are in conflict with provisions of the SSSA or the Operating Guidelines, the latter shall prevail. Capitalized terms in this CDIS Manual shall be interpreted in line with Article 1 of the SSSA and as set forth in the Operating Guidelines.

2. SETUP INSTRUCTIONS

- 2.1 Appendix A (“Setting up MyGSB”) provides instructions for setting-up MyGSB.
- 2.2 During the initial set-up, GSB and the Customer will exchange all information required to set up secure system communications using standard connection sheets provided by GSB, which may be amended from time to time. These are referred to as the “GSB IT Connection Sheet” and the “Customer IT Connection Sheet” respectively. In case of planned updates, the relevant connection sheet will need to be updated and provided to the other party with sufficient lead-time.

3. ACCESS AND USE

- 3.1 MyGSB can be accessed via: <https://mygsb.gasstoragebergermeer.com/welcome>
- 3.2 MyGSB is secured via 2-factor authentication, whereby every fresh login requires entering the user password and a system generated one-time password sent to the registered mobile number. This creates a secure connection between the Customer and GSB.
- 3.3 Each Customer can carry out the following actions on MyGSB:
 - 3.3.1 access live dispatching, finance and trading data;
 - 3.3.2 process and monitor their Secondary Trades with other Customers;
 - 3.3.3 continue using the SSSA services in the event the automated systems interface fail (download latest REQRES, upload new REQUEST, read contractual notifications).

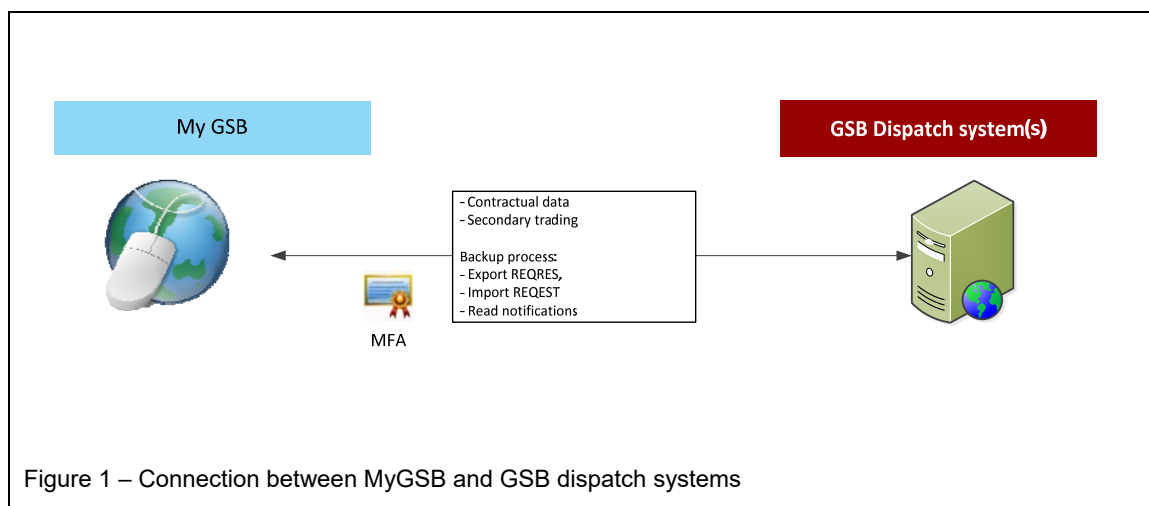
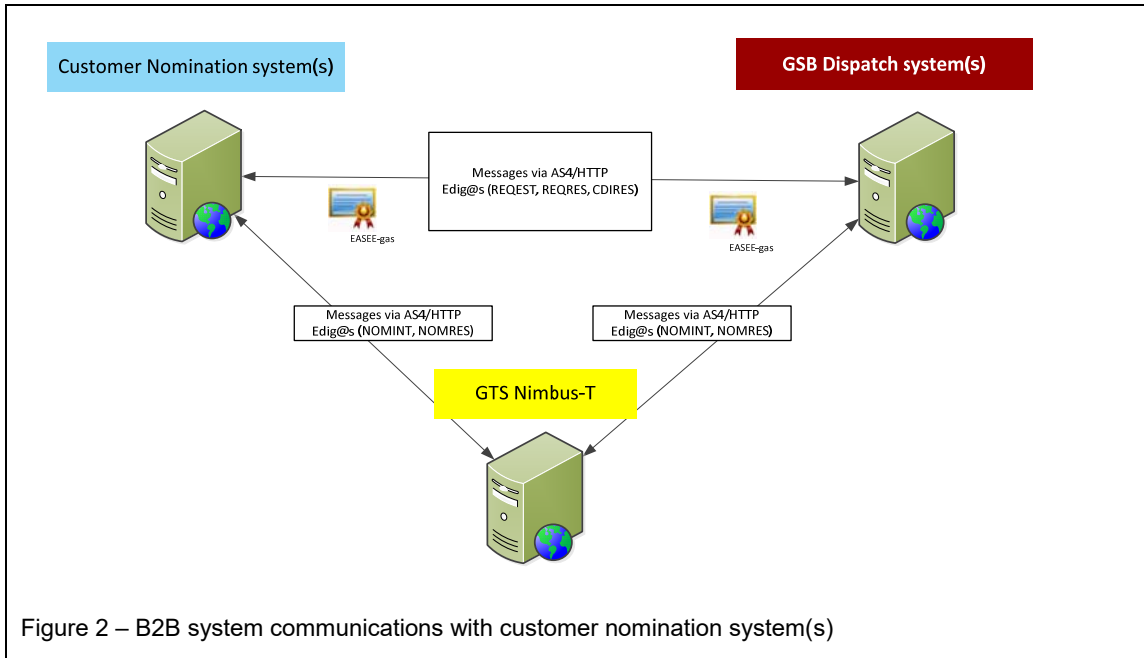


Figure 1 – Connection between MyGSB and GSB dispatch systems

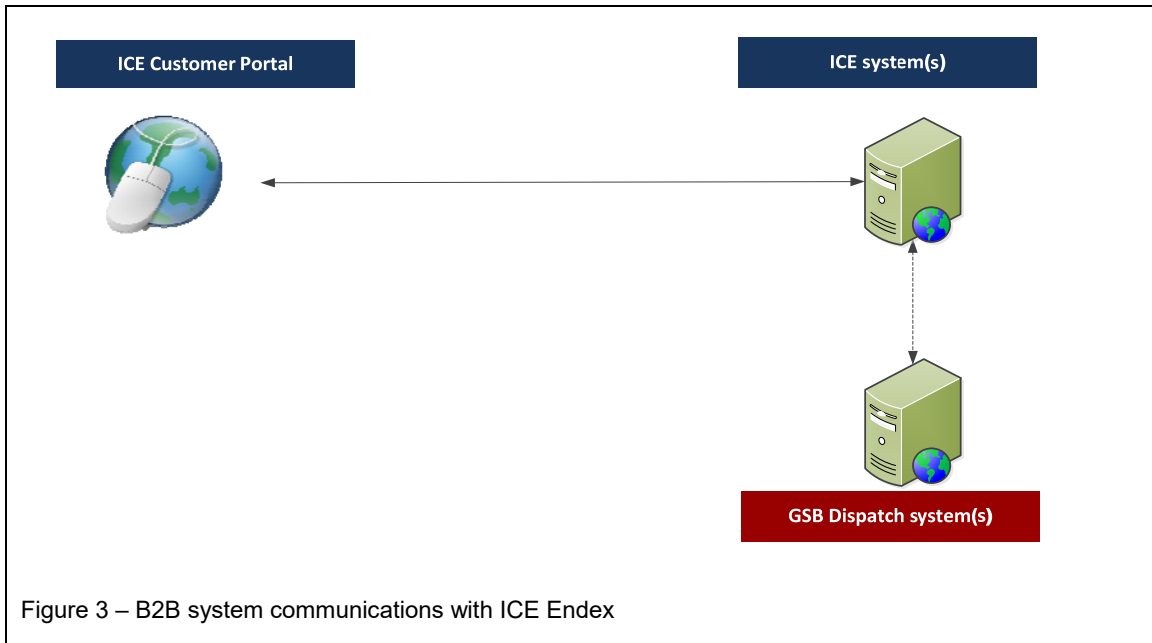
3.4 MyGSB is the only software tool where Customers can view and monitor their user data. The previous application “GENIE” is no longer supported as of the date MyGSB goes live (“Go Live”). Historic user data under the previous application is not migrated into the new GSB systems and will not be accessible through MyGSB. GSB will provide the Customer with a record of their historic user data dating earlier than the Go Live date in an excel format.

4. B2B SYSTEM COMMUNICATIONS

4.1 The systems of GSB and Customers communicate via an AS4/HTTP communication protocol. This creates a secure connection between the Customer’s systems and GSB, allowing the Customer to: use its nomination system to process injection and withdrawal requests (i.e. send REQUEST and receive REQUEST ACKNOW), receive its contractual quantities (REQRES), and receive contractual notifications (CDIRES).



4.2 GSB systems process trade requests received from ICE Endex and confirm whether Secondary Trades between Customers are to be approved or need to be “busted” by ICE Endex. Checks performed by GSB include capacity and credit checks among others. Customers can monitor the status of their Secondary Trades in MyGSB.



5. CONTINGENCY PROCEDURES

5.1 In the event that both Customer and GSB are unable to solve a connection problem, the Customer can use back-up communication available via MyGSB. These entail requesting GSB services by monitoring contractual quantities, uploading a REQUEST, and downloading the latest REQRES in MyGSB, as further described in Section 6.2.4.

6. MYGSB MANUAL

6.1 After logging in to MyGSB, the menu on the left covers three main sections where customers can retrieve data: a dispatching section, a finance section and a trading section. This chapter will dive into the detail of each section.

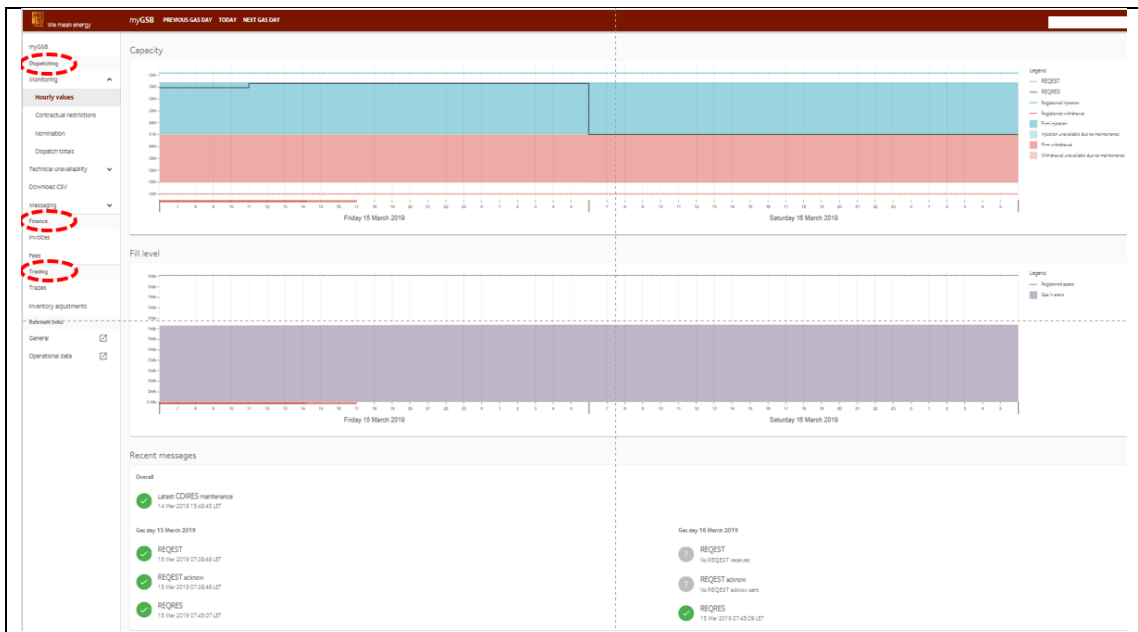


Figure 4 – MyGSB Hourly values screens, showing the main menu on the left

6.2 Dispatching

The “Dispatching” section on MyGSB provides all necessary data required for a 24/7 SSSA dispatching team (or its external supplier) to operate GSB. This section contains four menus: “Monitoring”, “Technical Unavailability”, “Download CSV” and “Messaging”.

6.2.1 Monitoring

The “Monitoring” menu contains information on the Customer’s individual rights, requests and request responses, total usage of all rights under the SSSA, and contractual restrictions (if any). Each of these items are represented in 48-hour visual overviews per GSB’s standard displays, as follows:

- ✓ the red line along the x-axis represents time past, the pink line along the x-axis represents the subsequent lead time of 2,5 hours, and the continuing white area indicates the hours remaining open for re-nomination requests;
- ✓ days can be switched using the “Previous Gas Day” and “Next Gas Day” buttons in the top bar;
- ✓ the exact number of the main parameter in an overview can be viewed by hovering above a specific hour (e.g. REQRES in the capacity overview);
- ✓ clicking on a specific hour-bar opens up an additional window on the right with the relevant values for that hour;
- ✓ individual items in the legend can be hidden from the graph by clicking on that item.

There are four sub-menus under Monitoring: “Hourly Values”, “Contractual Restrictions”, “Nominations”, and “Dispatch Totals”.

(i) Hourly Values

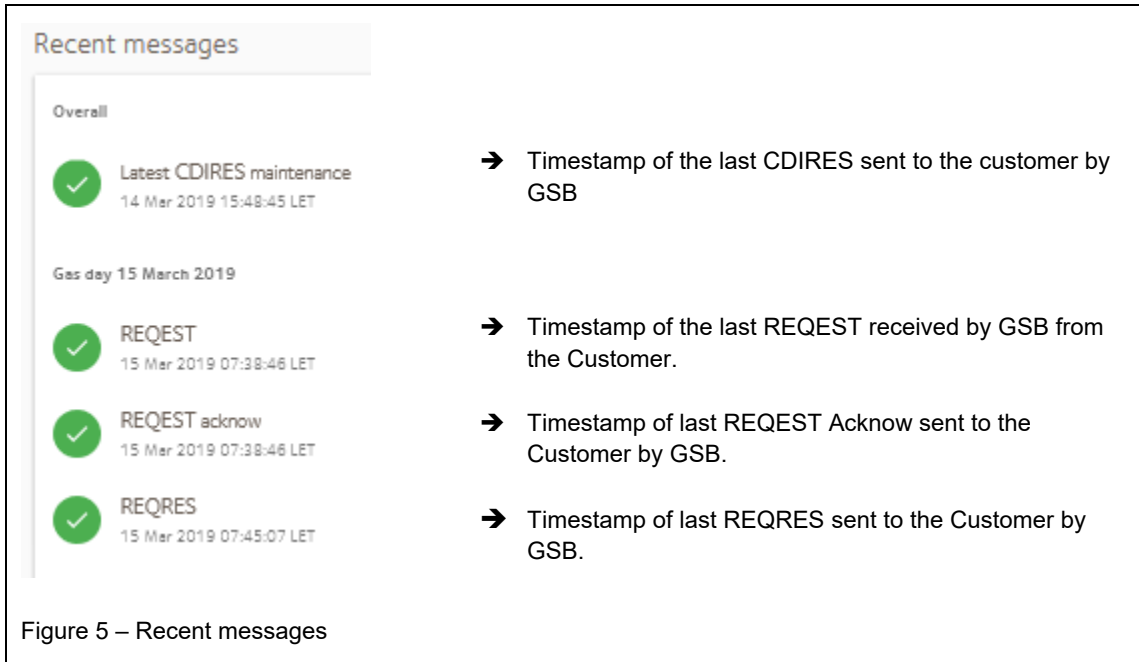
The Hourly Values sub-menu under Monitoring contains three visual overviews. The first overview “Capacity” shows the following information for the individual Customer:

- a. registered injection rights (positive values in the blue dotted line) and registered withdrawal rights (negative values in the red dotted line);
- b. firm injection and firm withdrawal rights (blue and red bars), i.e. including the pressure factor based on fill level;
- c. any reductions in firm injection and/or firm withdrawal due to contractual curtailments (blue and red striped bars);
- d. actual customer usage of the above-mentioned rights via the REQRES values for each hour;

Note: REQUEST is the value that the Customer requested to inject or withdraw for a specific hour. REQRES is the contractual value, gas-in-storage and availability of the storage facility (depending on available capacities).

The second overview “Fill Level” shows the Customer’s registered space and gas-in-storage position based on the latest REQRES values.

The third overview “Recent Messages” provides a brief overview of the latest messages exchanged (including timestamps) with the Customer, as shown in Figure 5.

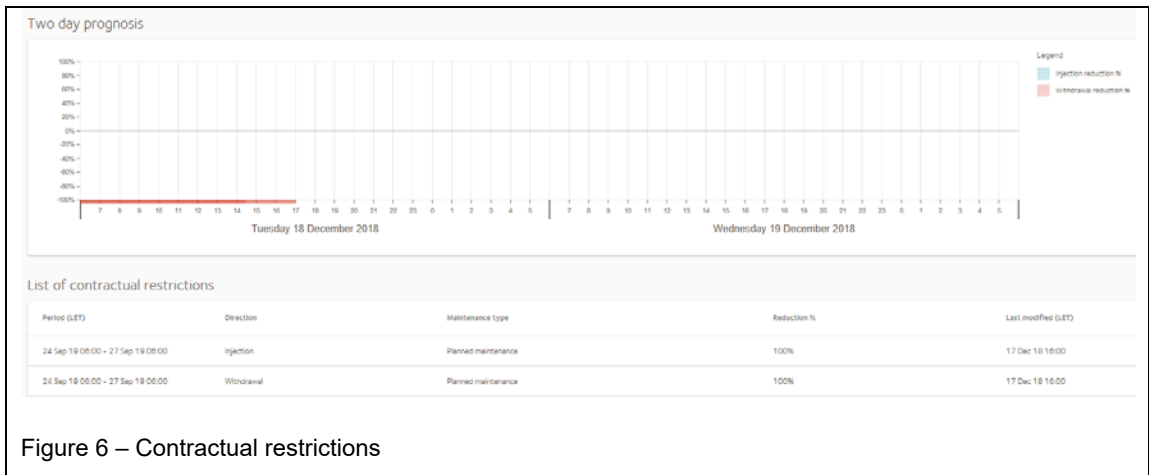


(ii) Contractual Restrictions

Following a change in contractual curtailment, GSB systems will push a CDIRES to the Customer. On a best efforts basis, GSB will also send an automated email to the Customer’s operational dispatch e-mail address (sender: taqa.mygsb.noreply@taqaglobal.com).

The Contractual Restrictions menu shows all contractual restrictions. The top graph displays the percentage restrictions for the hours in the current and the next Gas Day for both injection and withdrawal (if any).

The list underneath displays all historic (and forward planned, if any) contractual restrictions, highlighting the percentage reduction and the type of curtailment. Note the historic track record will only build from Go Live date.



At the bottom, there is a calendar overview of historic and planned maintenance, shown in categories ranging from 1-19% to 100% (daily averages).

(iii) **Nominations**

The Nominations menu shows the status of the nominations at TTF (to GTS) in relation to the GSB REQRES values. A white block with normal lining (not dotted) in the top picture means both the Customer and GSB have correctly nominated the REQRES values to TTF (REQRES = NOMRES). No further action is required.

However, it could also show an orange or red block in case there is no match at TTF yet. Customers are strongly urged to monitor their TTF nominations to match GSB REQRES values to avoid penalties in accordance with article 15 of the SSSA.

The underneath Recent Messages shows relevant messages including last received GTS NOMRES. Note that a green checkbox means the NOMRES has been received but this doesn't automatically mean REQRES values = NOMRES values.

(iv) **Dispatch Totals**

The Dispatch Totals menu shows the *cumulative* registered and firm injection and withdrawal rights for *all* SSSA Customers. The latest cumulative REQUEST and REQRES values are also shown on this graph. Underneath, the consequential cumulative interruptible usage is depicted. The graph at the bottom shows the storage facility's *total* space and fill level.

6.2.2 **Technical Availability**

Technical unavailability at GSB refers to actual physical unavailability of injection or withdrawal capacity compared to its maximum designed injection or withdrawal capacity as published on the AGSI+ website.

The "Technical Unavailability" menu allows customers to navigate directly to the RSS feed webpage of GSB and the unavailability webpage on the AGSI+ platform. Whenever GSB reports technical unavailability, both of these pages are updated with this information.

Technical unavailability at GSB does not necessarily equate to contractual unavailability. In other words, during a technical unavailability, GSB can choose to either keep the Customer whole or (partly) curtail contractually. Whenever a technical unavailability leads to contractual curtailment, this will appear on the pages Hourly Values, Contractual Restrictions, and Dispatch Totals on MyGSB.

6.2.3 **Download CSV**

Under the "Download CSV" menu, the Customer can choose a month within the past two years and download a CSV file with all hourly values for the selected month. Note that MyGSB will only contain historic data as of Go Live¹.

6.2.4 **Messaging**

The GSB IT system performs a REQUEST / REQRES cycle each fifteenth minute in the hour (XX:00hrs; XX:15hrs; XX:30hrs and XX:45hrs) and following a change in contractual curtailment. A new REQRES is only sent when values differ from previous

¹ As of the Go Live date this functionality only works with Google Chrome. Expanding this functionality to the other supported browsers will be implemented in the months after.

REQRES values, i.e. following a (new) Customer REQUEST, it should receive a new REQRES from GSB within the next 15 minutes. The status of the REQUEST / REQRES cycle can be monitored under the “Recent Messages” overview in “Hourly Values”.

In the rare event that the AS2/AS4 connection is not working, MyGSB offers functionality to continue services.

First, if the REQUEST in MyGSB does not equal the last request that the Customer intended to send, the Customer should check if the request message was actually delivered by checking if a REQUEST Acknow was received in their systems. If no REQUEST Acknow was received within 5 minutes, there could be a connection problem².

During a connection problem between the default nominating systems, the Customer can continue requesting capacities by manually uploading REQUEST messages through MyGSB, via the Manual REQUEST menu. Please only do so when agreed with GSB Dispatch.

If a REQUEST Acknow was received, GSB systems have received the REQUEST. Please check if the message format was accepted by checking the ACKNOW code. Note that in MyGSB only REQUEST values are shown that obey request lead-time. If the problem persists, please contact Bergermeer Dispatch to help investigate.

Furthermore, the Customer can use the button in the Resend REQRES menu to trigger the GSB systems via MyGSB to re-send the latest REQRES via the default IT connection between the Customer’s and GSB’s systems.

If this resending of the REQRES continues to fail (as there might indeed be a connection problem), the Customer can again use the MyGSB route as back-up by manually downloading the latest REQRES via this third sub menu.

XML message templates for the Customer’s contract are available upon request.

6.3 Finance

The “Finance” section on MyGSB contains two menus: “Invoicing” and “Fees”.

6.3.1 Invoices can be retrieved under the “Invoices” menu. Customer will receive an e-mail at the pre-determined e-mail address alerting them whenever a new invoice becomes available on MyGSB (note that invoices are not sent to Customers via e-mail).

6.3.2 Under “Fees”, the Customer can view all fees applicable at that moment in time, including historic fees, and in some cases the fees applicable in the future.

6.4 Trading

Under the “Trading” section of MyGSB, the Customer can view its primary trades and process and/or monitor their Secondary Trades with other Customers, as per the functions of the TSS described under the SSSA and the Operating Guidelines.

There are two menus under Trading: “Trades” and “Inventory Adjustments”.

² To solve the connection problem, please check with your IT department if the connection is in line with the latest connection sheet. If this does not solve the problem, please contact Bergermeer Dispatch to help investigate.

6.4.1 **Trades**

The Trades menu displays all primary trades that the Customer has ever captured in a GSB auction or open season. It shows the amount of space (“S”), the correlating injection (“I”) and withdrawal (“W”) capacities, and the contracted period and price.

A filtering tool at the top of the page enables selecting certain primary trades from specific auctions alone for display (e.g. typing “11122018” will show only those primary trades from the December 2018 auction).

Below the primary trades overview is a tool where the Customer can enter Register Transfers, Notified Trades and ACCESS Trades concluded with another Customer or Bank. This allows the Customer to notify GSB of a new transfer or trade and leads to their further processing by GSB.

Note that Register Transfers and Notified Trades are processed differently via MyGSB:

- a. A Register Transfer contains no price and it is presumed that payment is arranged separately by and between the Customers who have concluded the deal.
- b. A Notified Trade requires the Customers to enter the agreed price of their trade on MyGSB. Settlement and invoicing are subsequently arranged through GSB.

Upon concluding a Register Transfer or Notified Trade, both contracting Customers should enter this on MyGSB within thirty (30) minutes of one another. Subsequently, the system will perform a check to confirm that this trade does not breach capacity or credit limits and can be approved. Once approved, the transfer or trade will appear on MyGSB and the graphs underneath will be updated accordingly.

Please note that both Register Transfers and Notified Trades are concluded bilaterally between two Customers. This takes place outside of MyGSB and GSB does not facilitate or arrange for their conclusion.

6.4.2 **Inventory Adjustments**

The “Inventory Adjustments” menu displays any adjustments that were implemented in Customer’s Gas-in-Store rights.

6.5 **External Links**

The “General” link leads to the Website (www.gasstoragebergermeer.com). This is the commercial website of Gas Storage Bergermeer, which contains commercial information regarding future available capacity and upcoming auctions.

The “Operational Data” link leads to the AGSI+ website, which is an online platform where general technical European storage data overview is published (including a section for GSB), including actual physical usage of the storage facility.

Appendix A – Setting Up MyGSB

1. VERSION CONTROL

In case of any updates, a new Appendix will be provided by GSB.

	Update	Effective Date	Description
Version 1	[XX] Dec 2018	[XX] Jan 2019	Required changes for go live new GSB Systems

2. SYSTEM REQUIREMENTS

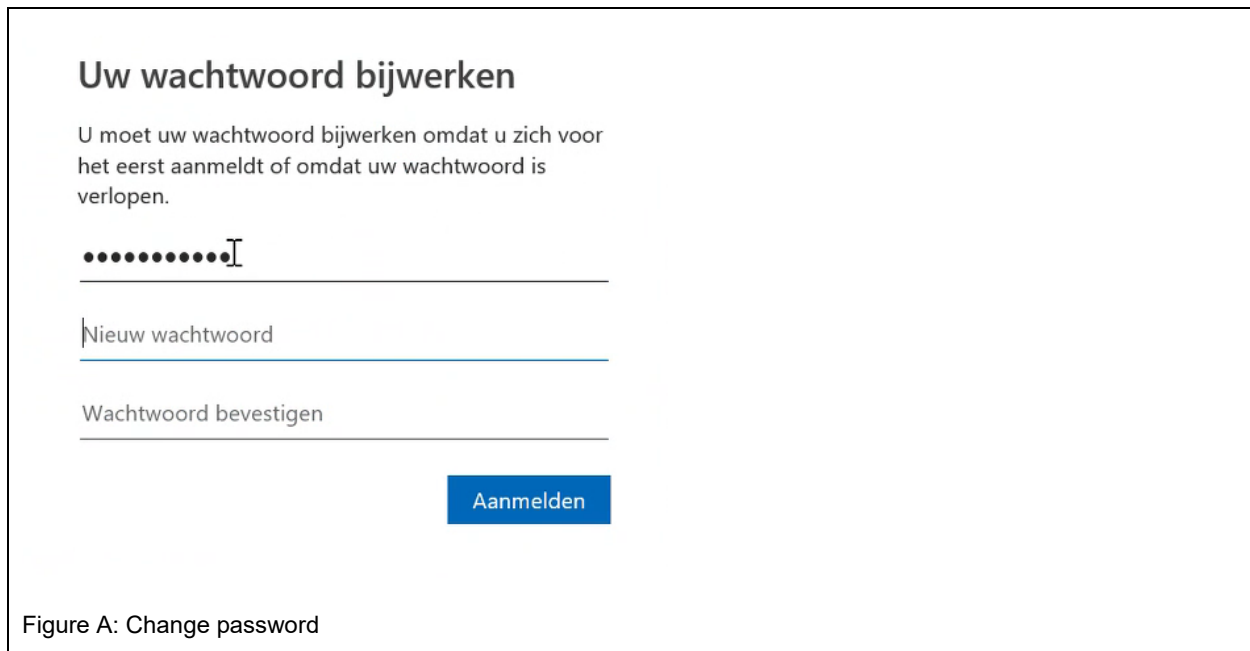
Browsers that are currently supported for MyGSB usage are Google Chrome, Fire Fox, Safari, Microsoft Edge.

3. MANAGING USER ACCOUNTS

Customer's Authorized Representative can request GSB commercial team to create a new MyGSB User account, or to remove an existing account. To setup a new account, GSB requires user's company email address. GSB will then create an account and email the MyGSB Username and initial password to the new user.

4. FIRST ACCESS TO MYGSB

After logging in with the provided username and initial password at <https://mygsb.gasstoragebergermeer.com>, the user will first be prompted to change password (as shown in Figure A below) and then provide additional information required for the 2-FA (as shown in Figure B below). After these steps, the user is ready to log-in to MyGSB.



Uw wachtwoord bijwerken

U moet uw wachtwoord bijwerken omdat u zich voor het eerst aanmeldt of omdat uw wachtwoord is verlopen.

.....I

Nieuw wachtwoord


Wachtwoord bevestigen

Aanmelden

Figure A: Change password

raak de toegang tot uw account niet kwijt

Wij hebben enkele gegevens nodig waarmee we kunnen verifiëren wie u bent, om ervoor te zorgen dat u uw wachtwoord opnieuw kunt instellen. We zullen deze gegevens niet gebruiken om u spam te sturen, maar alleen om uw account beter te beveiligen. **U moet minstens 1 van de onderstaande opties instellen.**

 Telefoon voor authenticatie is niet geconfigureerd. Nu instellen

 E-mailadres voor authenticatie is niet geconfigureerd. Nu instellen

voltooien

annuleren

Figure B