
Technical Specification Document

Gas Enquiry Service (GES) Service Definition

Version: XX

Effective Date:

TBC

Domestic Suppliers	N/A
Non-Domestic Suppliers	N/A
Gas Transporters	N/A
Distribution Network Operators	N/A
DCC	N/A

[It is proposed that RECCo will directly contract with the GES Provider. We have therefore not marked a REC party as being responsible for meeting the requirements of this service definition.]

Change History

Version Number	Implementation Date	Reason for Change
1.0	Date TBD	[To be completed with reference to any relevant CPs]

Contents Table

[To be included]

1 Description of service

- 1.1 The Gas Enquiry Service (GES) allows users to access gas market data where they are entitled to do so in accordance with the Data Access Matrix defined within the Data Access Schedule. Data is sourced from either the Gas Central Data Service or the Central Switching Service (CSS). The service consists of:
 - (a) An online portal to view data for all gas Registrable Measurement Points (RMPs); and
 - (b) An Application Programming Interface (API) service which allows Enquiry Service Users to gather information from the service in a specified manner.
- 1.2 The mechanism for accessing data via these routes and the associated access constraints have been defined in more detail below.
- 1.3 The service is a tool for viewing and accessing information sourced from data items already held in industry systems and does not prescribe any further validation of those data items. The GES Provider takes no responsibility for the accuracy of data other than ensuring that it reflects the data received, in accordance with agreed service levels. Identified inaccuracies should be notified to the organisation identified as the Data Master within the Data Specification and corrected at source via standard industry processes.
- 1.4 The purpose of this document is to define the technical requirements for the GES, to enable Enquiry Service Users to utilise the service and access data.
- 1.5 This Service Definition document should be read in conjunction with the Data Access Schedule which defines the governance rules relating to data access via the GES; and the Data Specification which defines the data items available under this service, and the means by which these are available to users.
- 1.6 The interfaces by which an individual user of the GES can interact with this service are defined in the [Data Specification] [Message Inventory]. The [Message Inventory] will define the content and format of screens and [API Messages] for the online portal and the API Service, respectively. Separately the GES Provider produces and maintains a user guide which defines the lower level operational processes and articulates the functionality of the service to users.
- 1.7 For the avoidance of doubt, the term Enquiry Service User refers to the organisation granted access to data in accordance with the Data Access Schedule; the term user refers to the individual person within an Enquiry Service User accessing the GES.
- 1.8 The following generic rules apply to the access of data across both the online portal and the API service:
 - (a) Data shall be available to Enquiry Service Users as defined in the Data Access Matrix. This is defined based on the Enquiry Service User Market Participant Role type, and also whether they are registered or appointed at the RMP – for example, in comparison to a Shipper or Supplier that is not registered. Additional data may be available to the current Registered Shipper and Supplier, as defined in the Data Access Matrix.
 - (b) Data item history will be maintained where specified in the Data Access Matrix. For example, the GES online service will show asset history to Enquiry Service Users entitled to this data.

- (c) Unless specifically conducting a search for the Retail Energy Location, the address details provided via a search will be the Meter Point Location. Enquiry Service Users will only be able to access the Retail Energy Location address for the purpose of switching.

2 Definition of users

- 2.1 The GES provides access to data to Enquiry Service Users, in accordance with the process specified in the Data Access Schedule. REC Parties are provided with access to data via the GES Online as part of the standard accession process and will retain access as long as they remain a REC Party. Non REC Parties must sign a Data Access Agreement¹ before accessing the GES Online or obtaining data via APIs.
- 2.2 The data items that each user can access, and any conditions of access relating to specific data items, are defined by the access afforded to that user's associated Enquiry Service User. The Enquiry Service User access is set out in the Data Access Matrix which forms part of the REC Technical Specification.

3 Service functionality

GES Online

- 3.1 GES Online is an interface designed to give human users access to data. It is not to be used to support automatic extraction capability e.g. data scraping. Enquiry Service Users must engage with the GES Provider where large scale data is required.
- 3.2 GES Online enables users to search for data relating to a specific RMP using data items specified in the User Guide, for example, the Meter Point Reference Number, address, Meter Serial Number or [Registration Identity]. Results will provide the RMP data recorded in the service, which the user may then select from in order to see the data that the user is entitled to view. The service will return all records that meet the search criteria, enabling the user to select the relevant record to view from the records returned. Where the search data does not provide any results, the user will receive a message that no data was found.
- 3.3 The Data Access Matrix defines the data that the user is able to access. This is determined by their Enquiry Service User Category, and, for certain data items, whether they are recorded as being registered or appointed at that RMP.
- 3.4 The user may access results to their search in interface screens specified in the Data Specification. The screens accessible to a user, and the data populated therein, are specific to Enquiry Service User Category.

GES API

¹ Consideration whether Shippers are required to do this if provision of this data via the DSC is retained.

- 3.5 The GES API is an interface designed to give machine to machine access to data.
- 3.6 The GES API enables Enquiry Service Users to search for data relating to a specific RMP using the criteria specified in the [Interface Definition] for example, Meter Point Reference Number, address, postcode or Meter Serial Number. The data required to be populated, and the results provided in response is specified in the [Interface Definition] of the Data Specification.
- 3.7 The Data Access Matrix defines the data that the Enquiry Service User is able to access. This is determined by their Enquiry Service User Category, and, for certain data items, whether they are recorded as being registered or appointed at that RMP.
- 3.8 Enquiry Service Users need to specify expected usage volumes with the GES Provider, and access to the GES API will be granted on this basis.
- 3.9 All Enquiry Service Users shall be limited to a certain number of requests per calendar month, per organisation. The maximum number of requests that can be made for a given web service method, per calendar month, is determined by the service plan associated with the subscription licence key. A hard stop limit is defaulted per Enquiry Service User, based upon the service plan.
- 3.10 The API service counts all requests made to each accessible web service method, per calendar month, for each Enquiry Service User. Where a web service method allows multiple requests to be made through a single request transaction, the web service will count each individually requested item as a request.

4 System access and user management

- 4.1 Once a new Enquiry Service User has been granted access to the GES in accordance with the Data Access Schedule, the Enquiry Service Administrator will inform the GES Provider who will, subject to provision of the necessary information [and agreements], provide access within 24 hours to:
 - The GES Online (URL); or
 - The GES API.

GES Online

- 4.2 All users require a username and password which must be entered and accepted before a user can begin a search. Users access the GES Online service via the UK Link Portal. If a user already has access to the UK Link Portal the user will need to be provisioned with the relevant privileges by their Local Security Officer (LSO) or the GES Service Provider. Access to the UK Link Portal is provisioned by the CDSP on behalf of the GES Service Provider. The provisions relating to the establishment of usernames and passwords is set out in the table below:

<i>User Creation & Management GES Online</i>
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Category	Description
Online	<p>The GES Provider shall create LSOs for each Enquiry Service User. For some Enquiry Service User Categories the GES Provider shall perform the role of LSO for the Enquiry Service User.</p> <p>The LSO shall have the ability to create more users, grant privileges associated with users, reset a user password and search for users. The LSO shall also be responsible for disabling, re-enabling, or deleting accounts.</p>
Online	Users other than the LSO have the ability to reset passwords.
Online	User identities will be system generated based on the users first and last names. If there is already a user within the system with the same first and last name, the system will automatically generate a number against the user identity e.g. JohnSmith1. This number will increment by one for every user in the system with the same first and last name.
Online	<p>The system will generate an initial password for new users and a replacement password for any forgotten passwords.</p> <p>The first time a user logs in with a generated password they will be prompted to change it and set security questions (to be used in the password reset procedure).</p>
Online	The system password expiry period is 45 days, users will be prompted in advance of the password expiring.
Online	When logging into the UK Link Portal, if a user enters their password incorrectly 5 times, their account will automatically lock. Provided that a user has configured their security questions, the user can unlock their account by providing the correct answers to the questions. Otherwise, in order for the user access to be unlocked, the user must contact their LSO.
Online	<p>A valid password must conform to the following rules:</p> <ul style="list-style-type: none"> • Be at least eight characters, and no more than 16 characters in length; • Contain a mixture of alpha and numeric characters; • Contain at least one upper case character; • Contain at least one numeric character (0-9); • Contain at least 6 alphanumeric characters (A-Z; a-z or 0-9); • Contain one special character (*())&^%\$@!~'[]:;<>?/ \+_-="); and • Cannot have previously been used by the user in the previous 12 months.

Online	In the event a user has forgotten their password, users will have the ability to reset their own passwords.
Online	There is a universal user inactivity session logout period, set at 30 minutes.

<i>User Creation & Management API</i>	
Category	Description
API	To enable an Enquiry Service User to access the API service interface and to authenticate themselves, with the service, the request for all web service methods must contain a service subscription licence key provided by the GES Provider.
API	The service subscription licence key is provided by the GES Provider and used by the web service to determine: <ul style="list-style-type: none"> • the web service methods that are available to the Enquiry Service User; • the request and response limits for the Enquiry Service User; • the data items that are available to the Enquiry Service User.
API	The API service can be accessed at the following endpoint: https://flpnwc-ae37c3305.dispatcher.hana.ondemand.com/sites?siteId=f5507072-7604-4738-be322e27b4721995#Shell-home
API	A help document to show the restful endpoints can be found here: [LINK]

5 Service availability

5.1 The GES Online and API services are available 24hrs a day 7 days a week, except during scheduled maintenance periods and unplanned outages.

- 5.2 The GES Provider shall provide a minimum [5] days notice to all Enquiry Service Users via their Contract Managers² of a planned outage, where possible. Where a planned outage has been notified this will not contribute to failure of the availability. The GES Provider shall also provide notice to the Switching Operator for inclusion in the forward schedule of change, in accordance with the Service Management Schedule.
- 5.3 In the event of an unplanned outage the Recovery Point Objective³ will be:
- (a) The latest extract from the Gas Central Data Service, for data provided from GCDS.
 - (b) The loading of CSS messages received since the last backup of data provided from CSS.

GES Online

- 5.4 GES Online shall have 99.75% availability outside of the daily scheduled maintenance periods of 05:00 to 07:00 hours.
- 5.5 GES Online primary hours of operation are Monday – Friday 08:00 to 18:00. GES Online will be available otherwise outside the scheduled maintenance windows, but may be subject to reduced performance whilst back-ups and data loads are performed.
- 5.6 The Return to Operation objective for GES Online is [1 hour].

GES API

- 5.7 GES API shall have 99.75% availability outside of the daily scheduled maintenance periods of 05:00 to 07:00 hours.
- 5.8 GES API is located within a cloud service therefore a specific Return to Operation objective is not stated.
- 5.9 After the service is restored, API requests will be processed in chronological order, once Return to Operation has been achieved.

² This will be REC Contract Managers [and DSC Contract Managers]. For users who do not access this as a Code party, the Contract Manager will be defined as part of the access arrangements

³ The maximum time period beyond which data on the system may not be recovered in relation to the loss of service

6 User support

- 6.1 The GES Provider will provide a service desk to provide technical support. This service desk will manage all user service contacts – such as reporting issues and queries.
- 6.2 Enquiry Service Users should⁴ route service contacts through either the GES Provider service desk or the Switching Operator’s service desk.
- 6.3 [Where incidents are raised that relate to the GES,] the GES Provider will respond to service contacts in line with the process set out within the Service Management Schedule. The GES service desk is available during working hours (8am to 6pm Monday to Friday). In the event of a service contact during non-working hours, contact resolution timescales will begin at the first working hour.
- 6.4 Users may raise service contacts via the GES Provider’s service desk in the following manner:
- Telephone;
 - Email; or
 - Service Desk Portal via Xoserve.com
- 6.5 Enquiry Service Users must provide the following information when registering a service contact:
- Full Name;
 - User (Organisation) Name;
 - Location;
 - Telephone Number;
 - Email address;
 - Query description; and
 - Further information as requested by the service desk to assist in investigation and resolution of the service contact.

⁴ Further guidance will be developed setting out the scope of each service desk available under the REC.

7 Service Levels⁵

7.1 Following receipt of [Market Messages] from the CSS Provider at Gate Closure, the GES Provider shall ensure acknowledgement of receipt within the following times:

<i>Performance Parameter</i>	<i>Performance Level</i>
<i>Processing of data received from the CSS relating to Secured Active Switches during Gate Closure period</i>	
Average daily volume	mean response to CSS time of 20 minutes or less
Average daily volume	90th percentile response to CSS time of 25 minutes or less
Peak daily volume	mean response to CSS time of 35 minutes or less
Peak daily volume	90th percentile response to CSS time of 40 minutes or less

7.2 Following receipt of [Market Messages] from the CSS Provider outside of the Gate Closure period, the GES Provider will validate, and as necessary notify the CSS Provider of any rejections, within the following times:

<i>Performance Parameter</i>	<i>Performance Level</i>
<i>Processing of data received from the CSS outside of the Gate Closure period</i>	
Average hourly volume	mean response to CSS time of 6 seconds or less
Average hourly volume	90th percentile response to CSS time of 10 seconds or less
Peak hourly volume	mean response to CSS time of 10 seconds or less
Peak hourly volume	90th percentile response to CSS time of 15 seconds or less

GES Online

⁵ [This section will include details of service levels against which the service has been designed. For example, this will include timescales for sending an initial response following receipt of a Market Message; and the timescales associated with any resultant processing steps, such as the update to internal systems or the onward sharing of data. Non-functional requirements have been agreed as part of DB4 baseline, which we would expect to form the basis of the enduring service levels. Additional service levels to those set out in the NFRs may be added where this adds required certainty on the required standards of performance. We will finalise the service levels with stakeholders for inclusion in the Spring 2020 consultation. Note that any change to the NFRs included in the DB4 baseline would need to be agreed through Switching Programme governance].

7.3 GES Online will provide the following response times⁶ to a user enquiry:

<i>Performance Parameter</i>	<i>Performance Level</i>
<i>Responding to an enquiry from a user</i>	
Average hourly volume	mean response to CSS time of 3 seconds or less
Average hourly volume	90th percentile response to CSS time of 6 seconds or less
Peak hourly volume	mean response to CSS time of 5 seconds or less
Peak hourly volume	90th percentile response to CSS time of 8 seconds or less

GES API

7.4 GES API Service will provide the following response times⁷ to a user enquiry:

<i>Performance Parameter</i>	<i>Performance Level</i>
<i>Responding to an API Call from an Enquiry Service User</i>	
Average hourly volume	mean response to CSS time of [1 seconds] or less
Average hourly volume	90 th percentile response to CSS time of [3 seconds] or less
Peak hourly volume	mean response to CSS time of [3 seconds] or less
Peak hourly volume	90th percentile response to CSS time of [6 seconds] or less

8 Maximum Design Volumes

- 8.1 The GES has been designed based on the requirements set out below. Where the values are breached, the service received by the user may not be subject to the expected Service Levels. This will not constitute a breach by the GES Provider.
- 8.2 Where Maximum Design Volumes are breached within a given month the GES Provider shall report the breach incident, and any impacts reported against the service. Where this becomes a frequent breach, the Code Manager may initiate a Change Proposal to increase the Maximum Design Volumes or take remedial steps to prevent recurrence of the breach.

⁶ The timings quoted are those within the GES Provider estate as the GES Provider is unable to guarantee connectivity and response times outside of this.

⁷ The timings quoted are those within the GES Provider estate as the GES Provider is unable to guarantee connectivity and response times outside of this.

8.3 The service shall allow for 3.8 million searches per month and 500 concurrent users without detrimental effect to performance. Concurrency is determined as synchronous user requests.

Receipt of data from CSS

8.4 Messages will be received from the CSS as defined in the Data Specification.

8.5 The GES shall have the capability to process, as a minimum, CSS messages relating to the following volume of successful Switch Requests:

- Average daily volume of 42,300
- A peak daily volume of 281,600
- An average hourly volume of 3,500
- A peak hourly volume of 25,300
- An annual volume of 15,450,000

8.6 In addition, the GES shall be capable of processing CSS messages relating to an annual volume of 375,800 Initial Registrations with capability to process an additional 250,000 Switch Requests in exceptional conditions in [X instances per annum], provided [X days notice has been provided].

Receipt of data from Gas Central Data Service / GRDA

8.7 Data will be provided to GES from the Gas Central Data Service in scheduled overnight deltas. Data populated in the UK Link system will be available in GES typically up to 24 hours after acceptance to the Gas Central Data Service, but can be up to 48 hours after acceptance. The GES Online Service will display the latest refresh date and time.

Receipt of enquiries from Enquiry Service Users

8.8 The GES shall be capable of processing enquiries at volumes of 3 times those of switch requests, i.e.:

- Average Daily Volume 127,000
- Peak Daily Volume 845,000
- Average Hourly Volume 10,500
- Peak Hourly Volume 76,000
- Annual Volume 46,350,000

9 Reporting

9.1 The following reports will be provided. Further information on the data items to be included in each report will be included in the Data Specification.

Performance Reporting

9.2 GES Online shall monitor utilisation, and where the GES Service Provider identifies unusual usage activity shall contact the Enquiry Service User. For such users this report shall identify set consider:

- Utilisation by Enquiry Service User
- Utilisation by user
- Daily usage
- Monthly usage.

9.3 GES API will monitor utilisation against the expected usage volumes. Where the actual usage exceeds the maximum usage in a given period as defined within the Enquiry Service User contract, the GES Provider may suspend the service and will contact the Enquiry Service User.

User Reports

9.4 The LSO of a company group can run various reports containing data about its users and status. These reports contain:

- User name
- User status
- User provisioning activity by Enquiry Service User - deletions

10 System Audit

10.1 For the purposes of audit management, the following data shall be available:

(a) GES Online will consider:

- Identity of the Enquiry Service User;
- Identity of the user; and
- Time and date of the user session.

(b) GES API Service is required to record the:

- Identity of the Enquiry Service User;
- Time and date of the transaction; and
- Details of the transaction or event.

10.2 The data to support the System Audit report should be retained for [12 months].

11 Data Handling

11.1 The GES shall be capable of storing information related to 25 million Supply Meter Points.

11.2 The GES shall be capable of expansion to support a 375,800 increase in the number of RMPs in the first year of the CSS's operation.

11.3 The GES shall hold the most recent 5 years' worth of historic data, unless specified to the contrary in the [Data Access Matrix].

11.4 [The GES shall be capable of detecting loss and duplication⁸ of messages transferred from/to it and shall have facilities for rectification. This will be through raising a query to the relevant source data's service helpdesk.]

Receipt of Gas Central Data Service data

11.5 Data will be provided to GES from the Gas Central Data Service. This logical interface is within the CDSP estate therefore is not defined.

11.6 Data will be provided to GES in line with the timescales set out in section 8.

Receipt of CSS data

11.7 Data will be received from the CSS via the Gas Registration Interface which is based on a MS Azure cloud environment. The interface will provide information via specific CSS messages, based on the event type. The format and content of these messages are defined in the Data Specification.

11.8 When a CSS message is received, the GES shall guarantee that the data will be made available within the timescales set out in section 8.

11.9 When incoming updates to the GES are processed on a chronological basis, CSS messages shall be processed before updates originating from Gas Central Data Service.

12 Security

12.1 In the event that a user detects a potential or suspected security breach they should inform the GES Service Provider service desk immediately.

GES API

12.2 The RESTful endpoints of the API service are available over HTTPS only, thereby ensuring that all communication between the web service and the client is secured at the transport level.

12.3 The SSL certificate issued for this service is 2048bit SHA2 256 encrypted and as such any server communicating with the GES API must be capable of understanding this higher-level type of certificate. In order to support this level of certificate Enquiry Service Users may need to patch the server making the request, or any intermediary proxy, to include any relevant hot fixes.

⁸ [Clarification regarding the design is required to determine how lost messages are to be identified.]