Technical Specification Document

Electricity Enquiry Service (EES) 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 EES 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 Electricity Enquiry Service (EES) allows users to access 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 Supplier Meter Registration Service, or the Central Switching Service (CSS). The service consists of:

(a) An online portal to view data for all electricity Registrable Measurement Points (RMPs); and

(b) An Application Programming Interface (API) service which allows Enquiry Service User to gather information from the service in a specified manner[1].

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. In some cases data is derived by the EES and flagged as such within the data display. The EES Provider takes no responsibility for the accuracy of data other than ensuring that it reflects the data received, in accordance with agreed service levels, and that display icons derived data received are being displayed in accordance with the relevant rules. 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 EES, to enable Enquiry Service Users to utilise the service and access data.

1.5 This Service Definition should be read in conjunction with the Data Access Schedule which defines the governance rules relating to data access via the EES; 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 EES 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 EES 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 EES.

1.8 The following generic rules apply to the access of data across both the online portal and the API service:

[1] This includes reporting to the Green Deal Central Charge Database (GDCC).

(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 appointed at the RMP – for example, the Registered Supplier may have access to more data than an Energy Supplier that is not the Registered Supplier.

(b) Data item history will be maintained where specified in the Data Access Matrix. For example, the EES online service will show asset history to Enquiry Service Users entitled to this data.

(c) The address details provided via a search will either be the Meter Point Location Address or the Retail Energy Location Address depending on the purpose for which the data is being used, in line with the relevant access provisions specified in the [CSS Service Definition/ Address Management Schedule].

2 Definition of users

2.1 The EES 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 EES website 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 Agreement before accessing the EES website 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

Online portal

3.1 The online portal 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. Alternative services should be utilised where large scale data is to be retrieved.

3.2 The EES shall deliver the following functional requirements:

Primary Search Facility	
Category	Description
Search Facility	Website users can search for data relating to a specific Metering Point using the MPAN, elements of the Metering Point Address, postcode or Meter Serial Number. Results provide the data associated to one or more of the identifiers held in the system, which in turn is based on

	the data contained within a register(s) managed within an external data service, e.g. MPAN and address are as held in SMRS and synchronised to the EES on a daily basis. Searches based on information that does not match the source criteria will return a message showing that no data was found.
Search Facility	Once a search has been performed, the website should display all matching MPANs in a list, with the associated address, GSP Group, Distributor and Trading Status for each MPAN.
Search Facility	Users can enter multiple or partial search criteria e.g. multiple postcodes and/or multiple Meter Serial Numbers and/or multiple MPANs. A maximum of 200 search results will be shown. If there are more than 200 matches, a system message will be displayed to the user.
Search Facility	If an invalid search parameter is entered, a system message will be displayed to the user.
Search Facility	Once an initial search has been performed, an advanced search facility becomes available to allow a user to refine the results based on multiple criteria: Building Numbers, Postcodes, Address Fragments e.g. "OLYMPIC STADIUM" LONDON, MPANs and Meter Serial Numbers.

Data Display	
Category	Description
Data display	Once an MPAN has been selected, the registration and meter data will be available to view in a complete and consistent format as defined in the Data Specification. Restrictions may apply to some data items; full details are included in the definition of the [Metering Point Search Results].
Data Display	Icons are displayed on the Metering Point detail page; these are derived from values associated with the RMP. A full list of these values and associated icons is included in the Data Specification. Icons are not subject to the data restrictions.
Data Display	The user can click on a telephone icon button on the Metering Point detail page to open a panel that details the telephone numbers: • Distributor Emergency Number • Distributor General Number • MPAS Customer Number • MPAS Supplier Number The details are maintained by the Master Admin User of each Company Group.
Data display	Information identifying the current Registered Supplier, and previous Registered Supplier(s), is shown, together with their period of Registration. In addition, information regarding Registrations that were Pending but subsequently Cancelled, is also published. For the

	avoidance of doubt, Initial Registration Requests or Switch Requests that were Rejected by the Central Switching Service are not published by the website, since these are not entered into the Central Switching Service and cannot therefore be uploaded to the website.
Data display	Registrations with a Registration Status of Pending, Secured Active, Active, Secured Inactive, Inactive and Cancelled shall be synchronised from the CSS to the ESS on a near real time basis and displayed on the website for each RMP on that basis.
Data display	The website shall show all Meter Serial Numbers associated with the MPAN, and associated data (Meter Type, Installation/Removal Dates, MAP and Installing Supplier). The website shall also advise the user of how many MPANs the Meter Serial Number is associated with, and a facility that shall list all the MPANs and addresses where there is an association.
Data display	Future changes are not shown until the date they become effective, except pending registrations.
Data display	Users will be able to identify on the MPAN Detail page when the data was last updated and by which industry participant.
Data display	The Supply Number, in the format set out in [Customer Interaction Schedule], is displayed on the website (in addition to the individual data items that make up the Supply Number).
Data display	For a given MPAN, the website shall publish the name, Market Participant Identifier and telephone number for the relevant Distribution Business and Supplier (linked to Company Group).
Data display	Suppliers shall be able to view all data for MPANs for which they are the current Registered Supplier in the Central Switching Service. For MPANs which an Energy Supplier is not the Registered Supplier, the visible data items will depend on the access rights granted by the current Registered Supplier. For a Supplier who is not the Registered Supplier to view all MPAN data, they must confirm via an on-screen question that they have the customer's permission to access the data.
Data display	Distribution Businesses have access to view data related to all MPANs in their portfolio. For MPANs which are not in the relevant distribution area, they shall have access to a limited dataset. If they want to access the full dataset, they will have to confirm they have a legitimate reason for accessing the data. If they choose 'no' they shall be returned to the search screen. If they choose 'yes' they shall be able to view data for the MPAN that is included in the search results screen.

Letter Creation

Category	Description
Letter creation	Distribution Businesses have the ability to create customer letters in relation to Supply Number enquiries, directly from the website. A number of letter templates will be available to the user, who may enter the customer name and modify the postal address. Only the Master Admin User will have the ability to create, delete and amend letter templates.

	The user is able to use the search facility and select MPANs that they wish to be included in the letter. Only MPANs within a company's distribution area can be selected. The user may also choose which MPAN's address should be included in the letter and can subsequently amend this. Once created, the letters will be stored in order for the user to download. All letters produced will be deleted from the system 7 calendar days after creation.

Non Domestic Customer Access

Category	Description
NDC Access	A NDC will be able to search within their portfolio by MPAN, Meter Serial Number, Address or Postcode. The search results will only contain MPANs that are part of that customer's portfolio. Other than this, the search facility will work in the same way as for other Enquiry Service Users.
NDC Access	Following a portfolio search, the NDC will be able to view detailed data for their chosen MPAN. Once an MPAN is chosen, they will be able to view the data defined in the [Metering Point Search Results], with the exception that they will only be able to view Supplier registration information for the period during which the MPAN has been part of their portfolio.
NDC Access	NDCs shall have the ability to add MPANs to their portfolio through an online form in the system or by bulk uploading a CSV file. NDCs can mark MPAN(s) for deletion from their portfolio on the service, however they cannot bulk delete through uploading a CSV file.
NDC Access	Any MPAN(s) that an NDC adds to their portfolio must be authorised by the Energy Supplier, if an Energy Supplier refuses authorisation, the MPAN will become in a blocked state for that individual NDC and cannot be requested again.
NDC Access	When requesting to add MPANs to a portfolio the following condition must be met; the MPAN cannot be associated with another NDC portfolio (either in authorised or pre-authorised state), must have an Energy Supplier associated with it and cannot be in a blocked state.
NDC Access	Any change to an NDC portfolio shall be stored, including the user ID, MPAN, date and time of the change and where appropriate the name of the csv upload file that created the entry. This data shall be stored on-line for a minimum of 1 year.
NDC Access	An NDC will have the ability to remove themselves from being an Enquiry Service User, thus terminating their account access and removing their portfolio.

Meter History Search Function

Category	Description

Meter History Search Function	A facility will be available that will allow electricity Meter Equipment Managers to search and view the meter history of an MPAN. The meter history will be displayed in a timeline view in a complete and consistent format as defined in the Data Specification.
Meter History Search Function	The currently appointed electricity Meter Equipment Manager will have a view of the MPAN meter history that will begin on the date of the first installed meter through to the present day.

API service

3.3 The EES API is an interface designed to give machine to machine access to data.

3.4 The EES shall deliver the following functional requirements:

Application Programming Interface (API)

Category	Description
API	An Enquiry Service User will be able to search via the API using an MPAN, MSN or Address (partial or otherwise).
API	The following web service methods can be used:

Web Service Method	Purpose
GetTechnicalDetailsByMpan	Retrieves the technical details for a given MPAN.
SearchUtilityAddress	Retrieves the Metering Point Address data matching the specified criteria.
GetErrorCodes	Request a list of error codes used by the web service.
GetSubscriberMethodLimits	Request the list of method limits and current usage for a particular subscriber.

	<table><tr><td>GetRelatedMPANs</td><td>Returns relationship data for a given MPAN</td></tr><tr><td>GetRELAddress</td><td>Returns Retail Energy Location (REL) data sets / items delivered to the EES from the CSS</td></tr></table> The returned data items are defined in the Data Specification.
API	The API will mimic the front-end search data access functionality, e.g. if the user is not the current Supplier or Distributor and has not indicated that it has authorisation to view the entire dataset for the MPAN(s), a restricted dataset will be returned. In the case of Supplier users, and where applicable; the supplier Access Matrix shall be invoked to determine what data is returned.
API	Where an address search only returns a single result, the result shall include all available data as specified in the [Metering Point Search Results] associated with that Metering Point. If a search finds more than 200 records, an error message will be returned advising the Enquiry Service User that it must refine its search.
API	Organisations accessing the API will be required to select a usage level, with a monthly lookup limit. This is designed to predict any potential capacity issues or needs to upgrade the infrastructure, for third parties this monthly limit will be linked to a charge. There is no restriction on Company Groups changing usage levels. Organisations with access to the API will be able to find out how many searches have been performed in the current month for that organisation.

3.5 Functionality may be restricted to certain user types. Details of system functionality are included in the table below:

Function	Description	Supplier	Distribution/ MPAS	Meter Operator	Restricted Access Companies	NDCs
User Maintenance	Can create, delete and manage *all* users within their company group	√	√	√	√	×

Password Reset	Can reset passwords and delete users without the ability to create or amend users.	√	√	√	√	×
Primary Search	Can search for Meter Points	√	√	√	√	×
Access Matrix Maintenance	Access Matrix that controls what meter data (where they are the current supplier) is available to other industry parties.	√	×	×	×	×
Customer Letter Generation	Users can create letter templates, generate and download letters for MPANs within their distribution area.	×	√	×	×	×
NDC MPAN Management	User can submit MPANs for authorisation by suppliers, user can also manage their MPAN portfolio.	×	×	×	×	√
Validate NDC MPANs	User that can approve or reject requests from NDCs to access specific meter data.	✓	×	×	×	×
Meter History Search	Can search for Meter History by Meter Point	×	×	√	×	×
Report Downloads	Area where D0312 legacy reports can be downloaded	√	×	√	×	×
User Reporting	Users can run reports detailing search behaviour and user attributes of users within their company group.	√	√	×	×	×
MPAN Management	User can send a request to a distributor for a new MPAN	√	×	×	×	×
Manage New MPAN Requests	User can respond to a new MPAN request from a Supplier	×	√	×	×	×

4 System access and user management

4.1 Once a new user has been granted access to the EES in accordance with the Data Access Schedule, the Enquiry Service Administrator will inform the EES Provider who will provide access within 24 hours to:

- The Electricity Enquiry Service Website (URL); or
- The Electricity Enquiry Service API

4.2 All users require a username and password which must be entered and accepted before a user can begin a search. The provisions relating to the establishment of usernames and passwords is set out in the table below:

User Creation & Management	
Category	**Description**
Website	The EES Provider shall create for each Company Group a single 'Master Admin User'. The MAU, must be a named individual with an identifiable email address which will be their username.
Website	The MAU shall have the ability to create more users, grant privileges associated with users, and search for users. The MAU shall also be responsible for arranging the resetting of passwords, disabling, re-enabling, deleting or reinstating accounts, creating new users and controlling what functionality users have access to. Note: deleted accounts will not be visible to users or user-run reports; however, they will continue to be recorded by the EES for audit purposes.
Website	Users other than the MAU can be assigned functionality by the MAU to have the ability to reset passwords, disable, re-enable, deleting or reinstating accounts and creating new users.
Website	The default for any Company Group is for their users to have their own individual email address and set a password up associated to it. A Company Group can decide whether to enforce the use of email addresses as usernames or not. If a company has elected to enforce this, verification emails will be sent to the chosen email address (username). Either way, usernames must be unique in the system.
Website	Where the company group has enforced the use of email addresses as usernames, the MAU may control access by adding valid email domains. This will restrict new users to those only with access to email addresses within a valid email domain. A Company Group can have multiple valid email domains or none.
Website	Where the Company Group has not enforced the use of emails as usernames, a user can either have their email associated to the user account or a proxy email address can be associated with the account to facilitate account verification and password resets. Proxy email addresses must belong to a verified user account within the Company Group and there is no limit to the number of users the proxy can be associated to.

Website	The system will generate an initial password for new users and a replacement password for any forgotten passwords. The first time a user logs in with a generated password they will be prompted to change it and set memorable questions (to be used in Password Reset procedure).
Website	The system password expiry period is 60 days, users will get warned from 5 calendar days before this period is up if they login to the system.
Website	If a user enters an incorrect password on five consecutive occasions within a 15-minute period, their account will be disabled and need re-enabling manually by the MAU or by another user with suitable privileges.
Website	A valid password must conform to the following rules: • Not contain 4 or more repeating characters. • Contain upper and lower-case characters. • Contain a mixture of alpha and numeric characters. • Be at least eight characters in length. • Not be reused within the last 8 passwords, nor within the last three months.
Website	In the event a user has forgotten their password, users will have the ability to reset their own passwords.
Website	Supplier Agents (Data Collectors, Data Aggregators & Meter Equipment Managers) are assigned their own username and password, however Suppliers may choose to restrict what data is available to them using the Access Matrix. Other agents employed by Energy Suppliers who do not have a Market Participant Identifier in MDD, such as sales agents, can be assigned usernames and passwords by an Energy Supplier, however responsibility for their actions will remain with the Energy Supplier.
Website	There is a universal user inactivity session logout period, set at 60 minutes. The system will advise the user when they are in the final minute of the inactivity period giving them an option to stay logged in or log out.
Website	The EES shall prevent any single user account from being used concurrently.
Website	Inactive accounts will be deleted; the default period for deletion of these accounts will be 90 days. MAUs will be able to request reports containing information regarding accounts that are approaching their deletion date. If an account is deleted, authorised users will be able to re-create the account using the same username (or email address). MAUs are exempt from account auto-deletion.

Website	For certain Company Groups there will be a maximum limit on the number of 'non-deleted' users that a Company Group can have at any one time. Once this limit is reached, the EES will not allow the MAU to create additional users. 'Deleted' users will not count in the limit.

User Creation & Management

Category	Description
API	To enable users of the API service interface to authenticate themselves, with the service, the request for all web service methods must contain a service subscription licence key provided by the EES Provider.
API	The service subscription licence key is provided by the EES Provider and used by the web service to determine: • the web service methods that are available to the user; • the request limits of the web service and web service methods for the user; • the response limits of the web service and web service methods for the user • the data items that are available to the web service user.
API	The API service can be accessed by any of the following endpoints.
API	A help document to show the restful endpoints can be found here: https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/Help

	URL	Type
Main	https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc	WCF
	https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/	Restful JSON
	https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/XML/	Restful XML
Trial[2]	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc	WCF
	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/JSON/	Restful JSON
	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/XML/	Restful XML

[2] Only applicable to Price Comparison Websites to facilitate testing prior to signing the access agreement.

5 Access constraints

5.1 Regardless of whether access is granted via the website or the API service, the data items that an Enquiry Service User is eligible to see will depend on its companies' user type and/or dictated by the Access Matrix set up by the Supplier associated to that MPAN[3].

Website access

5.2 All website users shall be limited to a certain number of MPAN searches per day. Once this limit has been reached, access to search and view data will be removed. By default, this is 600 views of an MPAN details page, however this is a configurable parameter per user and can be amended by the EES Provider.

API access

5.3 All Enquiry Service Users shall be limited to a certain number of requests per calendar month. 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 user, based upon the service plan.

5.4 The API service counts all requests made to each accessible web service method, per calendar month, for each 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.

5.5 In the event that the maximum number of responses is exceeded, the web service will return error code "DAT1003" that indicates this; the web service will not return any of the requested data.

6 Service availability

6.1 The EES website and API service are available 24hrs a day 7 days a week, except during scheduled maintenance periods and unplanned outages.

6.2 The EES website shall have 99.75% availability outside of scheduled maintenance periods.

6.3 The EES Provider shall provide a minimum [5] days notice to all Enquiry Service Users via Contract Managers[4] of a planned outage, where possible. The EES shall also provide notice to the Switching Operator for inclusion in the forward schedule of change, in accordance with the Service Management Schedule.

6.4 In the event of an unplanned outage, the EES will resume operation as soon as possible within 1 hour.

[3] [The Autumn 2019 consultation is seeking views in relation to the removal of functionality relating to the Supplier Access Matrix.]

[4] This will be REC Contract Managers. For users that do not access this as a REC Party, the Contract Manager will be defined as part of the access arrangements.

6.5 When the service is restored, updates from SMRS will be processed in chronological order, with CSS synchronisation messages being processed before enquiries from Enquiry Service Users.

7 User support

7.1 The EES 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.

7.2 Enquiry Service Users should[5] route service contacts through either the EES service desk or the Switching Operator's service desk.

7.3 Where incidents are raised via the Switching Operator's service desk that relate to the EES, the EES Provider will respond to service contacts in line with the process set out within the Service Management Schedule.

7.4 The EES service desk is available during working hours (8am to 6pm Monday to Friday). In the event of an outage during non–working hours, contact resolution timescales will begin at the first working hour.

7.5 If users experience issues accessing data, they may raise an incident via the EES Provider's service desk in the following manner:

- Telephone;
- Email; or
- Website

7.6 Enquiry Service Users must provide the following information when registering a query:

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

- 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 query.

7.7 The EES Providers will provide an initial response that includes an estimate on the timescale for full resolution of the query.

8 Service Levels[6]

8.1 Following receipt of Market Messages from the CSS Provider at Gate Closure, the EES Provider shall ensure acknowledgement of receipt within the following times:

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

[6] [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.]

8.2 Following receipt of Market Messages from the CSS Provider outside of the Gate Closure period, the EES Provider shall validate, and as necessary notify the CSS of any rejections, within the following times:

Processing of data received from the CSS outside of the Gate Closure period	
Average hourly volume	mean response time of 6 seconds or less
Average hourly volume	90th percentile response time of 10 seconds or less
Peak hourly volume	mean response time of 10 seconds or less
Peak hourly volume	90th percentile response time of 15 seconds or less

8.3 The online portal will provide the following response time to a user enquiry

Responding to an API call from an Enquiry Service User	
Average hourly volume	mean response time of 3 seconds or less
Average hourly volume	90th percentile response time of 6 seconds or less
Peak hourly volume	mean response time of 5 seconds or less
Peak hourly volume	90th percentile response time of 8 seconds or less

8.4 The API service will provide the following response time to a user enquiry

Responding to an API call from an Enquiry Service User	
Average hourly volume	mean response time of 3 seconds or less
Average hourly volume	90th percentile response time of 6 seconds or less
Peak hourly volume	mean response time of 5 seconds or less
Peak hourly volume	90th percentile response time of 8 seconds or less

9 Maximum Design Volumes

9.1 The EES 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 EES Provider.

9.2 Where Maximum Design Volumes are breached within a given month the EES 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.

9.3 The service shall allow for 4 million searches per month and 16,000 concurrent users without detrimental effect to performance.

Receipt of data from CSS

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

9.5 The EES 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

9.6 In addition, the EES shall be capable of processes 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.

9.7 The EES shall have the capability to process, as a minimum, CSS messages relating to the following volume of Switch Requests which fail to complete successfully:

- Average daily volume of 6,700
- A peak daily volume of 44,800
- An average hourly volume of 600
- A peak hourly volume of 4,000
- An annual volume of 2,455,000

9.8 In addition, the EES shall be capable of processing CSS messages relating to an annual volume of 25,900 failed Initial Registrations with capability to process an additional 250,000 Switch Requests in exceptional conditions.

Receipt of data from SMRS / ERDS

[This section will include any identified constraints on messages sent by SMRS and / or ERDS]

Receipt of enquiries from Enquiry Service Users

9.9 The EES shall be capable of processing enquiries at volumes of 3 times those of Switch Requests, for:

- Average Daily Volume
- Peak Daily Volume
- Average Hourly Volume
- Peak Hourly Volume
- Annual Volume

10 Reporting

Performance Reporting

10.1 The EES shall provide a monthly report to the REC PAB setting out:

- monthly usage[7];

User Reports

10.2 The MAU of a company group can run various reports containing data about their user searches, behaviours and status. These reports are, and contain:

[7] [Further work is being undertaken to define performance reporting requirements]

- Daily by User Report
- Daily by Supplier Report
- Total by User Report
- Total by Supplier Report
- User Detail Report
- User Summary Report
- Deletion Report

MPAN Limit Breach

10.3 The EES Provider will advise the relevant company group MAUs where a user reached the limit of MPAN views on two or more days within the previous 30 calendar days. This report will include the following details:

- UserID
- Date
- MPAN Views
- Username
- Last Name
- First Name
- Company Name

Non-Domestic Customer (NDC) Full Portfolio

10.4 The NDC shall be able to download their full portfolio into a csv file, or suitable alternative. The data available within the report will be identical to the online view, however it will also include the date & time and user ID that added the MPAN to the portfolio. The download will not include historic registration(s), including unsuccessful registrations, up to and including the date that the MPAN was submitted by the NDC to be included within the portfolio.

10.5 Any MPANs that have been 'deleted' from the portfolio shall not be included in this report.

10.6 Weekly reports will be sent to Energy Supplier MAUs and the Enquiry Service Administrator summarising numbers of NDC MPANs rejected and accepted in the previous 7 days and also the total count of MPANs Awaiting Authorisation, split out by time period (<1 week after upload, <2 weeks, <3 weeks and > 3 weeks)

Supplier Reports relating to NDCs

10.7 Automatic weekly reports will be emailed to Suppliers in a csv file. This report will include the following information:

- Number of MPANs authorised by the Supplier in the last 7 days.
- Number if MPANs rejected by the Supplier in the last 7 days.
- Total MPANs processed in the last 7 days (authorised + rejected).
- Number of MPANs awaiting authorisation for <1 week (since upload).
- Number of MPANs awaiting authorisation for <2 week (since upload).
- Number of MPANs awaiting authorisation for <3 week (since upload).
- Number of MPANs awaiting authorisation for >3 week (since upload).

10.8 The reports will be optional and will be initially sent to the Supplier MAUs, however this can be changed by removing and/or adding the NDC Report role to other users.

11 System Audit

11.1 For the purposes of audit management, the EES is required to record the:

- Identity of the user;
- Origin of transaction;
- Unique transaction reference(s);
- Time and date of the transaction: and
- Details of the transaction, event, or user action with copies of new and old values where data has changed.

11.2 The system should be capable of accommodating the scrutiny of formal and informal audits by RECCo (or its agent), or any other person legally entitled to carry out such an audit.

12 Data Handling

12.1 The EES shall be capable of storing information related to a total of 35 million Metering Points.

12.2 The EES shall be capable of expansion to support a 375,800 increase in the number of Metering Points in the first year of the CSS's operation.

12.3 The ESS shall be capable of holding a minimum of 5 years' worth of transactions.

12.4 The EES shall be capable of detecting loss and duplication 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.

12.5 The EES system shall be able to detect misalignment of data between itself and other systems with which it exchanges synchronisations and shall have facilities for rectifications. This will be through raising a query to the relevant source data's service helpdesk.

Receipt of SMRS / ERDS data

12.6 Data is transferred using secure File Transfer Protocols (sFTP) via an Upload File as defined in the Data Specification. The Data Specification identifies data provided by the SMRS as distinct from the ERDS, however the expectation is that both sets of data will be received as a single Upload File from each Distribution Business upon completion of Total Daily Processing.

12.7 The Upload File will contain any data items, for which the sender is responsible, that have changed since the last upload. It should include a sequence number, sender ID, date and time.

12.8 The EES shall validate headers and footers included in the file but will not validate the data included in the file. In the case of an error within the header or footer, the EES will communicate directly with the Distribution Business that sent the file.

12.9 Two types of Upload File can be sent, a full extract or an incremental update.

- Full extracts are sent when the Distribution Business sends its first Upload File to the EES or on agreement between EES Provider and the Distribution Business if necessary. The file will contain all information for all MPANs registered within the relevant Distribution Network.
- Incremental updates are sent every day and include every MPAN registered within the relevant Distribution Network, for which one or more data items have changed since the last Upload File was sent.

12.10 When an Upload File is received, the data held for each MPAN in the Upload File will be overwritten, although the EES will keep a record of the Supplier history for each MPAN (every previous, current and pending Supplier, along with effective to and from dates, will be shown). The EES will not keep a history of any overwritten data in the website viewer.

Receipt of CSS data

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

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

12.13 When incoming updates to the EES are processed on a periodic basis, CSS messages shall be processed before updates originating from the SMRS.

13 Security

13.1 Both the RESTful and SOAP 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.

13.2 The SSL certificate issued for this service is 2048bit SHA2 256 encrypted and as such any server communicating with the EES 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.

13.3 Also, within the certificate the web service URL, suds-ws.candc-uk.com, is referenced as a “Subject Alternate Name”, rather than the “Subject” of the certificate.