Technical Specification Document

Service Definition for the Electricity Enquiry Service (EES)

Version: 1~~0~~.1 Effective Date: TBC

Change History

Version Number	Implementation Date	Reason for Change
0.1	N/A	For consultation in December 2020
1.1	N/A	Initial Draft of Post CSS Version for Spring 2021 Switching Consultation

CONTENTS

1 Description of Service

1.1 The Electricity Enquiry Service (EES) allows EES 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 each ~~Meter Point Administration~~Electricity Retail Data Service and the Central Switching Service.

1.2 The EES consists of:

(a) an online portal to view data for all electricity Metering Points;

(b) an Application Programming Interface (API) service which allows EES Users to gather information from the service in a specified manner;

(c) a prepayment transaction processing function to match Meter Serial Numbers for Prepayment Meters to the associated Metering Point and Registered Supplier; and

(d) a reporting function enabling defined data sets to be downloaded by individual EES Users

1.3 The EES 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 from one or more Data Items by the EES in accordance with the rules set out in the Data Specification.

1.4 The EES Provider takes no responsibility for the accuracy of data other than ensuring that it reflects the data received, or has been derived from data received, in accordance with the Data Specification. Identified inaccuracies should be notified to the relevant Data Master identified within the Data Specification and corrected at source via standard industry processes.

1.5 This Service Definition should be read in conjunction with:

(a) the Data Access Schedule which defines the governance rules relating to data access via the EES;

(b) the Prepayment Arrangements Schedule which defines the process for allocating prepayment transactions;

(c) the Green Deal Schedule and Green Deal Central Charge Database Service Definition which define the process for validating data relating to Green Deal Plans; and

(d) the Data Specification (including the Data Access Matrix) which defines the Data Items accessible to each category of EES User, the means by which data is made available to users and the content and format of screens and API Messages for the online portal and the API service respectively.

1.6 The EES Provider shall produce and maintain a user guide which defines the lower level operational processes and articulates the functionality of the service to users.

1.7 The EES Provider is one of a number of Switching Data Service Providers and is therefore captured within the scope of the overall switching service management arrangements, as defined in the Switching Service Management Schedule.

2 Definition of Users

2.1 In this Service Definition, the term "**EES User**" refers to the organisation granted access to data in accordance with the Data Access Schedule; and the term "**Authorised ~~Representative~~Person**" refers to the individual representative of an EES User accessing the EES on behalf of the EES User.[1]

2.2 The EES provides access to data to EES Users, in accordance with the process specified in the Data Access Schedule. The Data Items that each Authorised ~~Representative~~ Person can access, and any conditions of access relating to specific Data Items, are defined by the access afforded to the EES User on behalf of which that Authorised ~~Representative~~ Person is acting. The EES User access is set out in the Data Access Matrix which forms part of the Data Specification.

2.3 In addition, the EES interfaces with the following services:

(a) data is provided by each ~~MPAS Provider~~Supplier Meter Registration Service to the EES via a synchronisation on each Working Day using a secure File Transfer Protocol (FTP) interface;

~~(a)~~(b) data is provided by the Central Switching Service Provider to the EES via CSS APIs;

~~(b)~~(c) Prepayment Meter Infrastructure Providers request data relating to the Registered Supplier for prepayment Meter Serial Numbers using a secure FTP interface. Responses from the EES are also provided via the same route; and

~~(c)~~(d) the Green Deal Central Charge Database (GDCC) Provider uses the EES to validate the Registered Supplier for Green Deal Plans using the API Service. The EES also provides information to the GDCC Provider where a Switch occurs in relation to a Metering Point with an associated Green Deal Plan.

2.4 For PPMIPs, the Energy Supplier shall ensure that the PPMIP provides the relevant data in accordance with this Service Definition and the Prepayment Arrangements Schedule.

3 Service Functionality

Online portal

3.1 The online portal is an interface designed to give Authorised ~~Representatives~~ Persons access to data. It is not to be used to support automatic extraction capability e.g. data scraping. EES Users must engage with the EES Provider where large scale data access is required.

3.2 Online portal users can search for data relating to a specific Metering Point using one or more of the following:

(a) Metering Point Administration Number;

(b) elements of the Metering Point Location Address including house number / name, building name, street and town / city;

(c) Metering Point postcode; or

(d) Meter Serial Number.

[1] ~~[Term Authorised Representative to be included in the Interpretations Schedule with reference to each of the REC Services]~~

3.3 Search results are provided where the search information matches the data associated with one or more Metering Points within the EES. Where search information does not result in a match, the EES will return a message showing that no data was found.

3.4 Authorised ~~Representatives~~ Persons can enter multiple or partial search criteria e.g. multiple postcodes and/or multiple Meter Serial Numbers. 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.

3.5 Once a search has been performed, the online portal will display all matched Metering Points in a list, with the associated Meter Point Location Address, GSP Group, Distribution Network Operator and Trading Status. Authorised ~~Representatives~~ Persons may refine the results based on multiple criteria: building numbers, postcodes, address fragments, Metering Point Administration Numbers and Meter Serial Numbers.

3.6 Where the EES User does not have a specified responsibility for a Metering Point, the Authorised ~~Representative~~ Person must confirm that it has a legitimate reason for accessing that data before the data is displayed. A limited data set may be available based on any restrictions in the Data Access Matrix.

3.7 Once a Metering Point has been selected, the registration and meter data is displayed on the Metering Point page. The Metering Point Search Results Market Message (as defined in the Data Specification) sets out the available data and any associated access restrictions. The following additional information will also be displayed:

(a) whether the Meter Serial Number is associated with more than one Metering Point – all associated Metering Points and addresses will be listed;

(b) when the data was last updated;

(c) the Supply Number, in the format set out in the Data Specification (in addition to the individual Data Items that make up the Supply Number); and

(d) icons will be visible to identify where data has been derived by the EES[2].

3.8 Where the Authorised ~~Representative~~ Person clicks on the telephone icon button on the Metering Point page the following contact details relating to the Registered Supplier and associated Distribution Network will be displayed:

(a) Distribution Network Operator emergency telephone number;

(b) Distribution Network Operator general telephone number;

(c) Distribution Network Operator customer helpdesk telephone number; and

(d) Registered Electricity Supplier's helpdesk telephone number.

3.9 In addition to the standard search functionality, Metering Equipment Managers also have the ability to search and view the meter history of a Metering Point. The meter history will be displayed in a timeline view in a complete and consistent format as defined in the Data Specification. The currently appointed Metering Equipment Manager will have a view of the meter history that will begin on the date of the first installed meter at the Metering Point, through to the present day.

[2] [Icon guidance to be included in the user guide referenced in paragraph 1.7.]

3.10 In addition to the standard search functionality, Distribution Network Operators also have the ability to create letters for Consumers in relation to Supply Number enquiries. The Authorised ~~Representative~~ Person shall use the search facility and select the Metering Points that they wish to be included in the letter. Only Metering Points associated with the respective Distribution Network Operator can be selected. The Authorised ~~Representative~~ Person may also choose which address should be included in the letter and can subsequently amend this. Once created, the letters will be stored to allow the Authorised ~~Representative~~ Person to download as required. All letters produced will be deleted from the system 7 calendar days after creation. A number of letter templates will be available to the Authorised ~~Representative~~Person, who may enter the customer name and modify the postal address. Only the Master Admin User (see Paragraph 4) will have the ability to create, delete and amend letter templates.

3.11 A Non-Domestic Consumer will be able to access data in accordance with the following:

(a) Non-Domestic Consumers will be able to search within their portfolio by Metering Point Administration Number, Meter Serial Number, Metering Point Location Address or postcode. The search results will only contain Metering Points that are part of that Consumer's portfolio; being the Metering Points for premises owned and/or occupied by the Non-Domestic Consumer or its Affiliates. Other than this, the search facility will work in the same way as for other EES Users with the exception that they will only be able to view Energy Supplier registration information for the period during which the Metering Point was part of their portfolio.

(b) Non-Domestic Consumers shall have the ability to add Metering Points to their portfolio through an online form in the system or by bulk uploading a CSV file, provided the Metering Point is not associated with another Non-Domestic Consumer's portfolio (either in an authorised or pre-authorised state). Non-Domestic Consumers can mark Metering Points for deletion from their portfolio on the service, however they cannot bulk delete through uploading a CSV file.

(c) Any Metering Point that a Non-Domestic Consumer adds to their portfolio must be authorised by the Energy Supplier. If the Energy Supplier refuses authorisation, the Metering Point will become in a blocked state for that individual Non-Domestic Consumer and cannot be requested again.

(d) Any change to a Non-Domestic Consumer's portfolio shall be stored, including the user ID, Metering Point Administration Number, date and time of the change and where appropriate the name of the Upload File that created the entry. This data shall be stored on-line for a minimum of 1 year.

(e) A Non-Domestic Consumer will have the ability to remove themselves from being an EES User, by terminating their Access Agreement.

API service

3.12 The API service is an interface designed to give machine-to-machine access to data.

3.13 An API service user can search for data relating to a specific Metering Point based on the data defined in the Data Specification~~via the API using a Metering Point Administration Number, Meter Serial Number or Metering Point Location Address~~.

~~3.13~~3.14 The following web service methods can be used:

Web Service Method	Purpose

GetTechnicalDetailsByMpan	Retrieves the technical details for a given Metering Point Administration Number.
SearchUtilityAddress	Retrieves the Meter Point Address data matching the specified criteria.
GetErrorCodes	Requests a list of error codes used by the web service.
GetSubscriberMethodLimits	Requests the list of method limits and current usage for a particular EES User.
GetRelatedMPANs	Returns relationship data for a given Metering Point Administration Number.

~~3.14~~3.15 The Data Items returned in response to an API search are defined in the Data Specification.

~~3.15~~3.16 Where the Enquiry Service User does not have a specified responsibility for a Metering Point, the Authorised ~~Representative~~ Person must confirm that it has a legitimate reason for accessing that data before the data is displayed. A limited data set may be available based on any restrictions in the Data Access Matrix.

~~3.16~~3.17 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 Authorised ~~Representative~~ Person that it must refine its search.

~~3.17~~3.18 EES Users accessing the API Service will be required to select a usage level, with a monthly lookup limit. For EES Users that are not required by Energy Licences to accede to this Code, this monthly limit will be linked to a charge. There is no restriction on EES Users changing usage levels.

~~3.18~~3.19 EES Users accessing the API Service can find out how many searches have been performed by its Authorised ~~Representatives~~ Persons in the current month using the GetSubscriberMethodLimits API.

~~3.19~~3.20 In addition to the standard APIs available to EES Users, the API Service also includes a bespoke API which is used by the GDCC Provider to validate the Registered Supplier for Green Deal Plans and to notify the GDCC Provider where a Switch occurs in relation to a Metering Point with an associated Green Deal Plan.

Prepayment Transaction Processing

~~3.20~~3.21 The EES includes a facility which allows Prepayment Meter Infrastructure Providers (PPMIPs) to submit bulk transaction files listing Meter Serial Numbers to the EES. The EES will process these bulk transaction files and return a response indicating the identity of the Registered Supplier and Metering Point Administration Number(s) associated with each provided Meter Serial Number at the point at which the prepayment transaction was made.

~~3.21~~3.22 This Registered Supplier information will then be used by the PPMIP to allocate prepayment transactions in accordance with the Prepayment Arrangements Schedule.

~~3.22~~3.23 The provisions relating to prepayment transaction processing are set out below:

(a) Electricity Prepayment Supplier Files will be uploaded by PPMIPs in the format defined in the Data Specification;

(b) Each PPMIP that uses the service shall have its own directory to upload and download files using secure FTP. This connection will also be used to retrieve the resultant response files.

(c) The EES shall validate each Electricity Prepayment Supplier File to confirm it reflects the format defined in the Data Specification. If a file fails validation, a rejection file will also be provided to the PPMIP containing the reason for rejection.

(d) The EES will process each Electricity Prepayment Supplier File and seek to identify the Metering Points and Registered Supplier associated with each provided Meter Serial Number and Customer Payment Date using the meter matching process detailed in Appendix 1. For the avoidance of doubt if one or more Meter Serial Number in the uploaded file is not found, this will not prevent the file from being processed. The response file will indicate those records that have not been matched to current data held in the EES.

(e) A single Electricity Prepayment Supplier Response File will be provided to the PPMIP in relation to each Electricity Prepayment Supplier File in the format defined in the Data Specification.

(f) The Electricity Prepayment Supplier Response File will either contain details of the Metering Point Administration Number(s), Registered Supplier and its registration date and Meter Type for the Meter Serial Number at the Customer Payment Date, or a code to show the Meter Serial Number was not located on the EES. Given that Meter Serial Numbers are not always unique it is possible that multiple instances could be returned by the EES.

(g) Where the EES identifies instances where multiple Meter Serial Numbers exist for a single entry on the Electricity Prepayment Supplier File, the EES shall perform two further validation processes:

i. any Meter Serial Numbers classified as Credit Meters (Meter Type N or H), will be disregarded from the set of returned records; and

ii. if the Transaction Routing Flag is set (in accordance with Paragraph 3.23) then only that record shall be returned.

(h) The PPMIP will be responsible for pulling the Electricity Prepayment Supplier Response Files from the EES directory. Electricity Prepayment Supplier Response Files will be stored on the EES directory for 28 days and after this time will be deleted by the EES Provider.

~~3.23~~3.24 The EES will include a facility for transaction routing where multiple Meter Serial Number records relating to Prepayment Meters exist on the EES. This facility will allow Electricity Suppliers to apply a Transaction Routing Flag, which shall be used to identify which Electricity Supplier is entitled to prepayment transactions relating to that Meter Serial Number. The provisions relating to transaction routing are set out below:

(a) a Transaction Routing Flag can be attributed to any Meter Serial Number in the EES where multiple records of a Meter Serial Number exist;

(b) Authorised ~~Representatives~~ Persons can search for Meter Serial Numbers, restricted to relevant Prepayment Meter types (K, S or T);

(c) a separate screen within the online portal is available for Electricity Suppliers to manually apply a Transaction Routing Flag. The Electricity Supplier may log into this screen and search for the Meter Serial Number. The screen will identify whether the Meter Serial

Number is valid for a Transaction Routing Flag; i.e. more than one record exists for that Meter Serial Number;

(d) the Electricity Supplier may declare "Not Responsible" for a period at the beginning, the end or the entire Registration if the Electricity Supplier believes it has no legitimate claim for the transactions associated with that Meter Serial Number. The EES will retain the date and user details associated with the amendment of a status;

(e) a Transaction Routing Flag will occur in the EES only when all but one Electricity Supplier has determined that it is "Not Responsible" for a Meter Serial Number;

(f) if new information becomes available to any Electricity Supplier involved with a Transaction Routing Flag, the Electricity Supplier may change its status at any point. This will have the effect of removing the Transaction Routing Flag until the Electricity Suppliers involved agree a solution; and

(g) on a successful Switch, any existing Transaction Routing Flag will be removed if the outgoing Electricity Supplier had its status set to Not Responsible. The Gaining Supplier will have its status for that Meter Serial Number set to "No Decision". A notification that the existing Transaction Routing Flag has been removed will be sent via email to all Electricity Suppliers involved with the existing Transaction Routing Flag. A new Transaction Routing Flag may be applied by the Gaining Supplier setting the status to the same as the Losing Supplier.

4 System Access and User Management

4.1 Once a new EES User has been granted access to the EES in accordance with the Data Access Schedule and Qualification and Maintenance Schedule, the Code Manager will inform the EES Provider who will provide access within [1 Working Day] to the online portal and/or the API s~~S~~ervice.

Online Portal

4.2 Each Authorised ~~Representative~~ Person shall have an individual user account, which shall only be accessed via entry of the correct username and password. On creation of the user account, the EES shall generate a single use randomly generated password to the user's email account as stored on the EES, the Authorised ~~Representative~~ Person shall be required to change this password when they first log on. An Authorised ~~Representative~~ Person can only be granted access to the EES for one EES User.

4.3 The default for any EES User is for their Authorised ~~Representatives~~ Persons to have their own individual email address and set a password up associated to it. An EES User can decide whether to enforce the use of email addresses as usernames or not. If an EES User has elected to enforce this, verification emails will be sent to the chosen email address (username). Either way, usernames must be unique in the EES.

4.4 The EES Provider shall create for each EES User a single 'Master Admin User' (MAU). The MAU must be a named individual with an identifiable email address which will be their username.

4.5 The MAU shall have the ability to:

(a) create more Authorised ~~Representatives~~Persons;

(b) grant privileges associated with other Authorised ~~Representatives~~ Persons e.g. allowing them to reset passwords, enable and disable accounts and create new Authorised ~~Representatives~~Persons;

(c) search for Authorised ~~Representatives~~Persons;

(d) arrange the resetting of passwords, disabling, re-enabling, deleting[3] or reinstating accounts, and controlling what functionality users have access to.

4.6 Where the EES User has enforced the use of email addresses as usernames, the MAU may control access by adding valid email domains. This will restrict new Authorised ~~Representatives~~ Persons to those only with access to email addresses within a valid email domain. An EES User can have multiple valid email domains or none.

4.7 Where the EES User has not enforced the use of emails as usernames, an Authorised ~~Representative~~ Person 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 EES User and there is no limit to the number of Authorised ~~Representatives~~ Persons the proxy can be associated to.

4.8 Inactive accounts will be deleted after 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 ~~Representatives~~ Persons will be able to re-create the account using the same username (or email address). MAUs are exempt from account auto-deletion.

4.9 Each Authorised ~~Representative~~ Person shall only be able to log on via one session at a time to prevent password sharing.

API Service

4.10 To enable users of the API service 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 to determine:

(a) the web service methods that are available to the EES User;

(b) the request limits of the web service and web service methods for the EES User;

(c) the response limits of the web service and web service methods for the EES User; and

(d) the Data Items that are available to the EES User.

4.11 The API service can be accessed ~~by any of the following~~via endpoints[4] detailed in the [EES API Technical Specification].

	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[5]	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc	WCF

[3] Deleted accounts will not be visible to Authorised Representatives or user-run reports; however, they will continue to be recorded by the EES for audit purposes.

[4] ~~[Details of the restful endpoints (https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/Help) to be included in the user guide referenced in paragraph 1.7]~~

[5] Only applicable to EES Users, that are not required by Energy Licences to accede to the Code, to facilitate testing prior to signing the Access Agreement.

	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

5 User Limits

Online portal access

5.1 All Authorised ~~Representatives~~ Persons using the online portal shall by default, be limited to 600 Metering Point searches per day. Once this limit has been reached, access to search and view data will be removed for the remainder of that day. This limit is a configurable parameter per Authorised ~~Representative~~ Person and can be amended by the EES Provider.

API access

5.2 All EES 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 EES User, based upon the service plan.

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

5.4 Where the maximum number of responses is exceeded, the web service will return an error code that indicates this; and the web service will not return any of the requested data.

Prepayment transaction processing

5.5 Each PPMIP shall submit no more than 5 Electricity Prepayment Supplier Files per day, with a maximum of 500,000 transactions in total in all files submitted per day.

5.6 PPMIPs that require abnormal volumes above the 500,000 transaction limit shall contact the EES Provider directly to discuss options for processing.

6 Service Availability

6.1 ~~The EES Provider shall ensure that the~~The EES online portal and API service~~s~~ ~~are~~ shall be made available 24 hours a day, 7 days a week, except during scheduled maintenance periods and unplanned outages. In addition, the EES Provider shall ensure that PPMIPs are able to submit files 24 hours a day, 7 days a week.

6.2 The EES ~~Provider shall ensure that the EES~~ online portal and API services shall have ~~achieves~~ 99.75% availability over each calendar year, excluding scheduled maintenance periods.

6.3 Where reasonably possible, the EES Provider shall notify the Code Manager with a minimum 5 days' notice of scheduled maintenance. ~~The Code Manager will notify EES Users as soon as reasonably practicable.~~ Scheduled maintenance shall be scheduled for [TBC – eg weekends/overnight]. Scheduled maintenance shall be limited to [X period] per calendar year.

6.4 In the event of scheduled maintenance, the EES Provider shall provide notice to the Switching Operator for inclusion in the forward schedule of change, in accordance with the Switching Service Management Schedule.

6.5 In the event of an unplanned outage e.g. to fix a priority incident, the notice and means will be specified in the Service Management Schedule.

~~6.4 In the event of an unplanned outage, the EES will resume operation as soon as possible, based on the following categorisation:~~

~~(a) critical (service not usable): 4 hours;~~

~~(b) major (service functional but at least one primary function not usable): 1 Working Day;~~

~~(c) minor (functionality still usable but inconvenience increased): 3 Working Days; and~~

~~(d) cosmetic (functionality not affected, workarounds available): fixed in next available release.~~

~~6.5 In the event of an outage during non-working hours (outside [08.00-18.00] hours on Working Days), the timescales above will begin at the first working hour. When the service is restored, updates from MPAS Providers will be processed in chronological order.~~

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 The EES service desk is available during working hours (08.00 to 18.00 hours on Working Days).

7.3 If Authorised ~~Representatives~~ Persons experience issues accessing data, they may raise an incident to the EES Provider's service desk via telephone or email. The EES Provider will provide an initial response to all enquiries within 1 Working Day. The initial response will include an estimate on the timescale for full resolution of the query. [6]

7.4 Any Switching Incidents and Switching Service Requests shall be raised via the Switching Portal. The EES Provider shall provide second line support in accordance with this Paragraph **Error! Reference source not found.**~~7~~ and the Switching Service Management Schedule.

7.5 The EES Provider shall support the response and resolution times for the following Switching Incident categories.

(a) Priority 1 – for Switching Incidents causing critical impact and significant financial loss / disruption - 10 mins response with a 1 - 4 hours resolution time;

(b) Priority 2 – for Switching Incidents causing non-critical impact with non-significant financial loss / disruption - 20 mins response with a 24 hours resolution time;

(c) Priority 3 – for Switching Incidents causing adverse impact but can be reduced to moderate adverse impact - 45 mins response with a 72 hours resolution time;

[6] [Ongoing discussions between RECCo and the EES Provider to determine the approach to delivering the service desk]

(d) Priority 4 – for Switching Incidents causing minimal impact - 1 day response with a 10 day resolution time.[7]

~~7.3~~

8 Service Levels

8.1 Following receipt of Market Messages from the CSS Provider at Gate Closure, the EES Provider shall ensure acknowledgement of receipt and make data available via the online portal and API service within the following times:

Performance Parameter	*Performance Level*
Processing of data received from the CSS relating to Secured Active Switches during Gate Closure period	
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

8.2 Following receipt of Market Messages from the CSS Provider outside of the Gate Closure period, the EES Provider shall ensure acknowledgement of receipt and make data available via the online portal and API service within the following times:

Performance Parameter	*Performance Level*
Processing of data received from the CSS outside of the Gate Closure period	
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

~~8.1~~8.3 The online portal will provide the following response time to an enquiry:

Responding to an enquiry ~~call~~ from a~~n~~ ~~Enquiry Service~~EES 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

~~8.2~~8.4 The API service will provide the following response time to an enquiry:

Responding to an API call from an ~~Enquiry Service~~EES 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

[7] [These SLAs reflect the overall switching service management priority levels – DCC is considering application of these SLAs across each Switching Data Service].

Prepayment transaction processing

~~8.3~~8.5 The EES shall poll the upload directory every 15 minutes and shall perform the file validation checks immediately after polling has completed, allowing almost immediate feedback of success or failure of this validation to be notified to PPMIPs.

~~8.4~~8.6 For successfully uploaded files; results files shall be available within four hours of transmission to the EES, within the constraints of a Working Day.

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 users 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 to the REC Performance Assurance Board, 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[8].

Receipt of data from ~~MPAS Providers~~Supplier Meter Registration Agents

~~9.3~~9.4 The EES shall have the capability to process a full extract or an incremental update from ~~MPAS Providers~~SMRAs.

~~9.4~~9.5 Full extracts are sent when an ~~MPAS Provider~~SMRA sends its first Upload File to the EES or on agreement between the EES Provider and the ~~MPAS Provider~~SMRA if necessary. The file will contain all information for all Metering Points registered within that ~~MPAS~~SMRS.

9.6 Incremental updates are sent every day via the Upload File and include every Metering Point registered within that ~~MPAS~~SMRS, for which one or more data items have changed since the last Upload File was sent.

Receipt of data from the CSS Provider

9.7 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

9.8 In addition, the EES shall be capable of processing CSS messages relating to an annual volume of 375,800 Initial Registrations.

[8] This volume of concurrent users includes both EES Users and SDES Users.

9.9 In exceptional circumstances, the EES Provider shall be capable of processing CSS messages relating to 250,000 Switch Requests in addition to the normal day's volume.

Prepayment transaction processing

~~9.5~~9.10 The EES shall deliver the results of a maximum number of 100 Electricity Prepayment Supplier Files on a daily basis.

10 Business Continuity/Disaster Recovery

10.1 In the event of an unplanned outage, the system shall resume operation within 1 hour.

~~10.1~~10.2 Penetration testing of the EES infrastructure shall be undertaken at least once in each 12 month period, and a report provided to the Code Manager regarding the outcomes of this test, to include any observations or findings, and recommendations for any required remedial actions.

~~10.2~~10.3 A test of the business continuity plan for the EES shall be undertaken at least once in every 12 month period, and a report provided to the Code Manager regarding the outcomes of this test, to include any observations or findings, and recommendations for any required remedial actions.

11 Reporting

11.1 The following reports will be generated by the EES and provided to the recipient on request, or as part of a defined schedule:

Report Name	Timescale	Description
Performance Reporting	Monthly	The EES shall provide data relating to the use of the service for consideration by the REC Performance Assurance Board.
Daily by User Report	Where required	The MAU can download this report which contains the username and the total number of searches that have been made on each day by that particular Authorised ~~Representative~~Person. It shall also show the number of times 'yes' and 'no' are pressed on the confirmation page[9] along with the number of times 'yes' was pressed when an Authorised ~~Representative~~ Person viewed data for which it was not the Registered Supplier.
Daily by Supplier Report	Where required	The MAU can download this report which contains the total number of searches that have been made on each day by that particular Electricity Supplier. It shall also show the number of times 'yes' and 'no' are pressed on the confirmation page along with the number of times 'yes' was pressed when an Authorised ~~Representative~~ Person viewed data for which it was not the Registered Supplier.
Total by User Report	Where required	The MAU can download this report which contains the total number of searches that have been made during the period defined within the query at the Authorised ~~Representative~~ Person level.

[9] This refers to the page where Authorised Representatives are asked to confirm that they have a right to view the relevant data.

		It shall also show the number of times 'yes' and 'no' are pressed on the confirmation page along with the number of times 'yes' was pressed when an Authorised ~~Representative~~ Person viewed data for which it was not the Registered Supplier.
Total by Supplier Report	Where required	The MAU can download this report which contains the total number of searches that have been made during the period defined within the query at the supplier level. It shall also show the number of times 'yes' and 'no' are pressed on the confirmation page along with the number of times 'yes' was pressed when an Authorised ~~Representative~~ Person viewed data for which it was not the Registered Supplier.
User Detail Report	Where required	The MAU can download this report which contains information relating to all the actual searches that have been performed by the EES by Authorised ~~Representative~~ Person for the time period, where a Metering Point has been selected. The MAU running the report shall be able to search by an individual username as well as by the whole EES User. The report shall provide details of the Electricity Supplier and address of the Metering Points viewed; and the user detail information such as the e-mail address, phone number and fax number, place of work for both the Authorised ~~Representative~~ Person and the line manager (if these have been populated).
User Summary Report	Where required	The MAU can download this report which contains details for each Authorised ~~Representative~~ Person that has made searches in an MAU configurable time period, where a Metering Point has been selected. The report shall display all the user details as in the User Detail Report, but only display totals instead of information about the specific reports.
Deletion Report	Where required	This report shall allow the MAU to supply a parameter of the number of days until expiry (D). The report will list all Authorised ~~Representatives~~ Persons for their EES User which will expire in the next D days unless the user logs in i.e. a "stale" account.
Metering Point Limit Breach	Where required	A report will be sent to the relevant MAU where an Authorised ~~Representative~~ Person reached the limit of Metering Point views on two or more days within the previous 30 calendar days.
~~Monthly Consolidated Report~~	~~Where Required~~	~~Each EES User shall be able to download a full set of the data defined in the Data Specification into a CSV file, or suitable alternative. The data available within the report will be identical to the online view.~~
Non-Domestic Consumer Full Portfolio Report	Where required	The Non-Domestic Consumer 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 Metering Points to the portfolio. The download will not include historic registration(s), including unsuccessful registrations, up to and including the date that the Metering Point was submitted by the Non-Domestic Consumer to be included within the portfolio.

		Any Metering Points that have been deleted from the portfolio shall not be included in this report.
Non-Domestic Consumer Supplier Reports	Weekly	Automatic weekly reports will be emailed in a CSV file to the Registered Supplier. The reports will be initially sent to the Electricity Supplier's MAU; however, this can be changed by removing and/or adding the NDC Report role to other Authorised ~~Representatives~~Persons. The report will include the following information: • number of Metering Points authorised by the Electricity Supplier in the last 7 days; • number of Metering Points rejected by the Electricity Supplier in the last 7 days; • total number of Metering Points processed in the last 7 days (authorised and rejected); • number of Metering Points awaiting authorisation for <1 week (since upload); • number of Metering Points awaiting authorisation for <2 week (since upload); • number of Metering Points awaiting authorisation for <3 week (since upload); and • number of Metering Points awaiting authorisation for >3 week (since upload).
Non-Domestic Consumer Consolidated Code Manager Report	Weekly	Automatic weekly report will be provided in a CSV file to the Code Manager containing the same information as the Non-Domestic Consumer Supplier Report, consolidated to contain data for all Electricity Suppliers.
Outstanding Non-Domestic Consumer Requests	Weekly	Automatic weekly report will be provided in a CSV file to the Code Manager containing a list of all Metering Points awaiting authorisation. The report will include the following information: • Non-Domestic Consumer ID; • Non-Domestic Consumer name; • Metering Point Administration Number; • date added to portfolio; • days since upload; • Electricity Supplier name; and • Electricity Supplier Market Participant identifier.
Unallocatable Prepayment	On request	The EES shall provide data required by the Code Manager to calculate the market share figures for the Unallocatable Transactions process as described in the Prepayment Arrangements Schedule.

Transaction Report		Calculation of these market share figures shall be based on a daily electricity Metering Point count from all GSP Groups by Meter Type which will be aggregated to form a single value for market share for each Electricity Supplier. The EES Provider shall provide separate market share figures for each prepayment technology.
Switching Service Management Reports	Monthly	The GES Provider shall provide a monthly performance report to the Switching Operator, providing details of overall service performance.[10]

12 Additional Services

12.1 In addition to the standard service defined in Paragraphs 1 to 10, the EES Provider may agree to provide additional services to EES Users, based on data received in its role as EES Provider.

12.2 Additional services may include the provision of reports and API services to individual EES Users on a bilateral basis. Reports may be made available to the Authorised ~~Representative~~ Person via secure FTP or other secure method as agreed with the EES User.

12.3 The data and reports made available via such additional services must only contain EES provisioned data that is accessible by the relevant category of EES User, as defined in the Data Access Matrix.

12.4 Paragraph 12.3 does not prevent the use of data provided by the EES User, or other publicly available data, from being used as part of any such additional services.

13 System Audit

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

- identity of the Authorised ~~Representative~~Person;
- origin of transaction;
- unique transaction reference(s);
- time and date of the transaction; and
- details of the transaction, event, or Authorised ~~Representative~~ Person action with copies of new and old values where data has changed.

13.2 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.

14 Data Handling

14.1 ~~[~~The EES shall be capable of storing information related to a total of 55.3 million MPANs.

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

[10] [Further work being progressed by DCC to define the reporting requirements, specifically the contents of the monthly performance report]

14.3 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 MPAS Provider's service helpdesk.~~

14.4 The EES system shall be able to detect mis-alignment 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[11].]~~

Receipt of ~~MPAS~~ SMRS data

14.5 Data is transferred using secure FTP via an Upload File from each ~~MPAS Provider~~SMRA upon completion of Total Daily Processing.

14.6 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.

14.7 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 ~~MPAS Provider~~SMRA that sent the file.

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

- Full extracts are sent when the ~~MPAS Provider~~SMRA sends its first Upload File to the EES or on agreement between EES Provider and the ~~MPAS Provider~~SMRA if necessary. The file will contain all information for all Metering Points registered within the relevant Distribution Network.

- Incremental updates are sent every day and include every Metering Point registered within the relevant Distribution Network, for which one or more data items have changed since the last Upload File was sent.

14.9 When an Upload File is received, the data held for each Metering Point in the Upload File will be overwritten. The Upload File will include a record of the Electricity Supplier history for each Metering Point (every previous, current and pending Electricity Supplier, along with effective to and from dates, will be shown). The EES will not keep a history of any overwritten data in the online portal viewer.

Receipt of CSS data

14.10 The EES shall receive data from the CSS in 'real time' and provide an initial acceptance / rejection within the timescales set out in Paragraph 8~~7~~. Data received from CSS will be available via the online portal and API service within the timescales set out in Paragraph 8.

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

15 Security

15.1 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.

~~[11] Provisions only relevant post CSS Go Live.~~

15.2 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 EES Users may need to patch the server making the request, or any intermediary proxy, to include any relevant hot fixes.

15.3 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.

Appendix 1 - Meter Matching in PPMIP Allocation Process

1 Process

1.1 Where an Electricity Prepayment Supplier File is received in accordance with Paragraph 3.21, the EES will perform a matching routine ("Algorithm") where an exact match, character by character, will be sought. When an exact match is found, the EES will return the information associated with this Meter Serial Number to the PPMIP regardless of the meter type.

1.2 In all instances, the EES will perform a series of Algorithms to try and identify the correct Meter Serial Number.

1.3 If after applying the Algorithms to the Meter Serial Number provided by a PPMIP, a match is found, the EES will return the information associated with this Meter Serial Number to the PPMIP.

1.4 If after applying the Algorithms to the Meter Serial Number provided by a PPMIP, a match is not found, but the information returned from the EES shows that the Metering Point Administration Number is registered with one or more -Meter Serial Numbers and provides a Supplier ID, then the process detailed in the REC Prepayment Arrangements Schedule should be followed. If neither the Meter Serial Number nor Metering Point Administration Number can be found on the EES, the transaction shall be classed as 'Unallocated' and the process outlined in the REC Prepayment Arrangements Schedule should be followed.

Algorithm 0 – Exact Match

1.5 The Meter Serial Number provided by the PPMIP must match exactly, character for character, with that in the EES.

Algorithm 1 – Remove all Non-Alphanumeric Characters

1.6 Algorithm 1 will remove any character that is not A-Z and 0-9 from the Meter Serial Number.

1.7 For example, all of the following will be treated as 'ABC1234'

Meter ID	Will be treated as	Note
'ABC_1234'	'ABC1234'	
' ABC1234'	'ABC1234'	
'ABC1234 '	'ABC1234'	
'AB_C1234.'	'ABC1234'	
'AB.C.1234'	'ABC1234'	

Algorithm 2 – Alpha instead of Numeric used

1.8 For Meter Serial Numbers that are intended to be 9 characters in length and conform to the following pattern:X99X99999

1.9 Where:

- X is an alpha character (A-Z)
- 9 is a numeric value (0-9)

Replace the letters with digits where it is a numeric field, replacing:

- O with 0
- I with 1
- S with 5

1.10 Note: all non-alphanumeric characters will be removed for this algorithm.

Algorithm 3 – Extra Zero after Board Code

1.11 For Meter Serial Numbers that are intended to be 9 characters in length and conform to the following patterns:

Element:	a	b	C	d
Format:	X	99	X	99999

1.12 Where:

- X is an alpha character (A-Z)
- 9 is a numeric value (0-9)

1.13 After removing all non-alphanumeric characters, for Meter Serial Numbers whose character count is greater than 9 and for which element d is greater than 5 characters in length, remove any left padding zero characters such that element d is 5 characters in length. For example

Meter ID	Will be treated as	Note
S98L012345	S98L12345	
S98L0012345	S98L12345	
S98L067890	S98L67890	
S 98-L_067890	S98L67890	
F97S1234	F97S1234	No change
F97S123456	F97S123456	No change

1.14 Note: All non-alphanumeric characters will be removed for this algorithm.

Algorithm 4 – missing zero after Board Code

1.15 For Meter Serial Numbers that are intended to be 9 characters in length and conform to the following patterns:

a	b	c	d
X	99	X	99999

1.16 Where:

- X is an alpha character (A-Z)
- 9 is a numeric value (0-9)

1.17 After removing all non-alphanumeric characters, for Meter Serial Numbers whose character count is less than 9 and for which element d is less than 5 characters in length, add left padding zero characters such that element d is 5 characters in length. For example

Meter ID	Will be treated as	Note
S98L1234	S98L01234	
S98L12	S98L00012	
S98L0012	S98L00012	
S 98-L_6789	S98L06789	
F97S01234	F97S01234	No change
F97S123456	F97S123456	No change

1.18 Note: All non-alphanumeric characters will be removed for this algorithm.

Algorithm 5 – Moves transaction dates by +/- 5 days

1.19 Where there has not been a unique match on Meter Serial Number and Transaction Date for transactions older than 6 months, Algorithm 5 will look for matches by moving the Transaction Data by +/- 5 days.

1.20 A report will be issued to Electricity Suppliers monthly, detailing the transactions which may have been allocated to them had the Algorithm have been applied by +/- 40 days.

Algorithm 8 – Missing 'B' Board Code

1.21 Remove all Meter Serial Number non-alphanumeric characters.

1.22 Where the Meter Serial Number is 8 characters in length and the 4th character from the left is not an alpha, insert character B into character position 4, making the Meter Serial Number 9 characters in length. For example; S0612345 will be treated as S06B12345.

Algorithm 10 – apply algorithms 1, 2, 3, 4 & 8

1.23 Apply algorithms 1,2,3,4 & 8 as defined above.