

# Electricity Central Online Enquiry Service

## Application Programming Interface (API)

### Technical Specification

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1.0	Final	03/12/2018	Final copy after approval
1.1	Amend	28/06/2019	ECC260 changes
1.2	Amend	22/07/2019	Update summary of available web service methods
1.3	Amend	22/07/2019	Updated for Faster Switching Programme
1.4	Amend	10/01/2020	Updated for Faster Switching Programme
1.5	Amend	21/02/2020	Updated for Faster Switching Programme
1.6	Amend	01/09/2020	Removal of Access Matrix
1.7	Amend	14/12/2020	GetRelatedMPANs – addition of response data items
1.8	Amend	15/12/2020	GetRELAddresses correction
1.9	Amend	25/05/2021	Updated for Faster Switching Programme

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## 1. Introduction

This document outlines the web service methods and data items that are exposed by the ECOES Application Programming Interface (API) web service. This document should be used in conjunction with the (API) section (section 16) of the ECOES URS which explains the business rules.

This service incorporates the following:

- Provision of access to the electricity industry data within ECOES.
- Provision of a RESTful interface, with both XML and JSON messages, in addition to the SOAP/XML interface.
- The use of Key Value Pairs throughout the Request and Response objects allows for methods to easily be updated with new key value pairs, without the need for updating the WSDL.

Note that this document contains the methods and data items that are being developed for the Faster Switching Programme. These methods will not be available for use until Faster Switching go-live in 2022 and have been clearly marked in the document.

## 2. Service Overview

The ECOES API service provides access to the ECOES data set.

Access to service is granted via Industry Role specific subscriptions which can have one or many licenses associated with them. Each subscription **can** have the following restrictions put in place:

- Access to WebMethods can be restricted either completely or by calls per month.
- Access to Data Items can be restricted completely by Industry Role.
- Access to Data Items can be restricted by Template Role Configuration.

Any subscription whose industry role is a Supplier or Distributor must have a corresponding ECOES Company Group associated with them.

The service provides a Try Before you Buy service for Price Comparison Website companies.

The ECOES API service will be accessed by any of the following endpoints

	URL	Type
<b>Main</b>	<a href="https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc">https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc</a>	WCF
	<a href="https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/">https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/</a>	Restful JSON
	<a href="https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/XML/">https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/XML/</a>	Restful XML
<b>Trial<sup>1</sup></b>	<a href="https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc">https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc</a>	WCF
	<a href="https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/JSON/">https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/JSON/</a>	Restful JSON
	<a href="https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/XML/">https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/XML/</a>	Restful XML

The service also provides a help document to show the Restful endpoints can be used.

<https://www.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/Help><sup>2</sup>

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<sup>1</sup> Only applicable to Price Comparison Websites

<sup>2</sup> Faster Switching related websmethods will not available until CSS go-live (Summer 2022)

### 3. Domain Values

There are a number of web methods that return an explicit set of valid values. The table below provides a full list of these domains and the possible valid values returned. Where the domain is defined in the MRA Data Transfer Catalogue (DTC) AND the valid set of values is deemed as likely to change at some point in the future, a link will be provided to the relevant page of the MRA DTC on-line portal.

Domain	Value	Meaning
DCC Service Flag	A	Active – The MPAN has been adopted by the Data Communications Company
	S	Suspended – The Data Communications Company has suspended control of the MPAN.
	W	Withdrawn - The Data Communications Company has withdrawn the MPAN from its control.
Energisation Status	D	De-energised
	E	Energised
Green Deal Status	None	There are no expired, active, or pending green deals for the MPAN.
	Expired	There are one or more Green Deals assigned to the MPAN, with an end date in the past.
	Active	There are currently one or more active Green Deals assigned to the MPAN.
	Pending	There is one or more Green Deal that is due to come into effect for the MPAN at a future date.
In Home Display Install Status	D	Declined – the customer has declined the offer to install an In-Home Display by the Supplier.
	E	Existing – the customer already has an In-Home Display when changing supplier
	I	Installed – the customer has accepted the offer, by the Supplier, for an In-Home Display and it has been installed.
LLF Class Indicator	As defined by the MRA Data Transfer Catalogue <a href="http://dct.mrasco.com/DataItem.aspx?ItemCounter=0775&amp;searchMockItems=False">http://dct.mrasco.com/DataItem.aspx?ItemCounter=0775&amp;searchMockItems=False</a>	
Measurement Class	A	Non-Half Hourly Metered
	B	Non-Half Hourly Unmetered
	C	HH metered in 100kW premises
	D	Half Hourly Unmetered
	E	HH metered sub 100kW CT
	F	Half Hourly Metering Equipment at sub 100kW premises with current transformer or whole current and at Domestic Premises
	G	Half Hourly Metering Equipment at sub 100kW premises with whole current and not at Domestic Premises
Meter Type	As defined by the MRA Data Transfer Catalogue <a href="http://dct.mrasco.com/DataItem.aspx?ItemCounter=0483&amp;searchMockItems=False">http://dct.mrasco.com/DataItem.aspx?ItemCounter=0483&amp;searchMockItems=False</a>	
MPAN Trading Status	N	New – The MPAN is a new MPAN created by a distributor and has no Supplier in place as yet.
	R	Registered – The MPAN has been registered to a Supplier, but the Supplier has not provided sufficient data to enable trading.
	T	Traded – The Supplier has provided all the required data to enable the MPAN to be set as trading.
	X	Disconnected – The MPAN has been recorded as disconnected.

## 4. Summary of Available Web Service Methods

This section summarises the web service methods that are exposed through the ECOES API service.

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.
GetRelatedMPANs	Returns relationship data for a given MPAN
Faster Switching Methods	Purpose
GetRELAddresses	Returns Retail Energy Location (REL) data delivered to ECOES from the Central Switching Service (CSS).
SearchRELAddress	Retrieves the technical details for the MPANs matching the specified REL Address.
GetCSSMessages	Retrieve the CSS messages for a given MPAN received within the last 90 days.

## 5. Service Limitations

The ECOES API service can be provided to subscribers with certain usage restrictions. The usage limitations currently in force can be obtained using the `GetSubscriberMethodLimits` method as defined in section 10. This method also returns the number of requests that have been made to date during this calendar month.

### Request Limitations

The ECOES API web service can have limitations imposed upon the number of requests that can be made per calendar month, for each service subscriber. 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 subscription, based upon the service plan. Each subscription can define their own hard stop limit which will stop the service from returning results once the limit is reached each month.

### Request Counting

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

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.

### Response Limitations

The ECOES API web service imposes limitations upon the number of responses that are returned by each web service method for each service subscriber. In the event that the maximum number of responses is exceeded (200), the web service will return error code "DAT1003" that indicates this; the web service will not return any of the requested data

## 6. Web Service Security

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

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

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.

To enable users of the ECOES API service interface to authenticate themselves, with the service, the request for all web service methods must contain a service subscription licence key.

The service subscription licence key is provided by Gemserv and is used by the web service to determine:

- the web service methods that are available to the caller.
- the request limits of the web service and web service methods for the caller.
- the response limits of the web service and web service methods for the caller; and
- the data items that are available to the web service caller.

Figure 1 below shows the composition of the “Authentication” structure used to pass the subscription licence key to the web service.



**Figure 1**

Level	Field	Description
1	Authentication	Mandatory.  For all web service methods the “Authentication” structure must be supplied.
2	Key	Mandatory.  Holds the web service subscription licence key, as supplied by Gemserv.



## 7. SearchUtilityAddress

### Method Purpose

The “SearchUtilityAddress” method allows the caller of the web service to retrieve a set of Metering Point Addresses data that match the specified criteria.

### Method Inputs

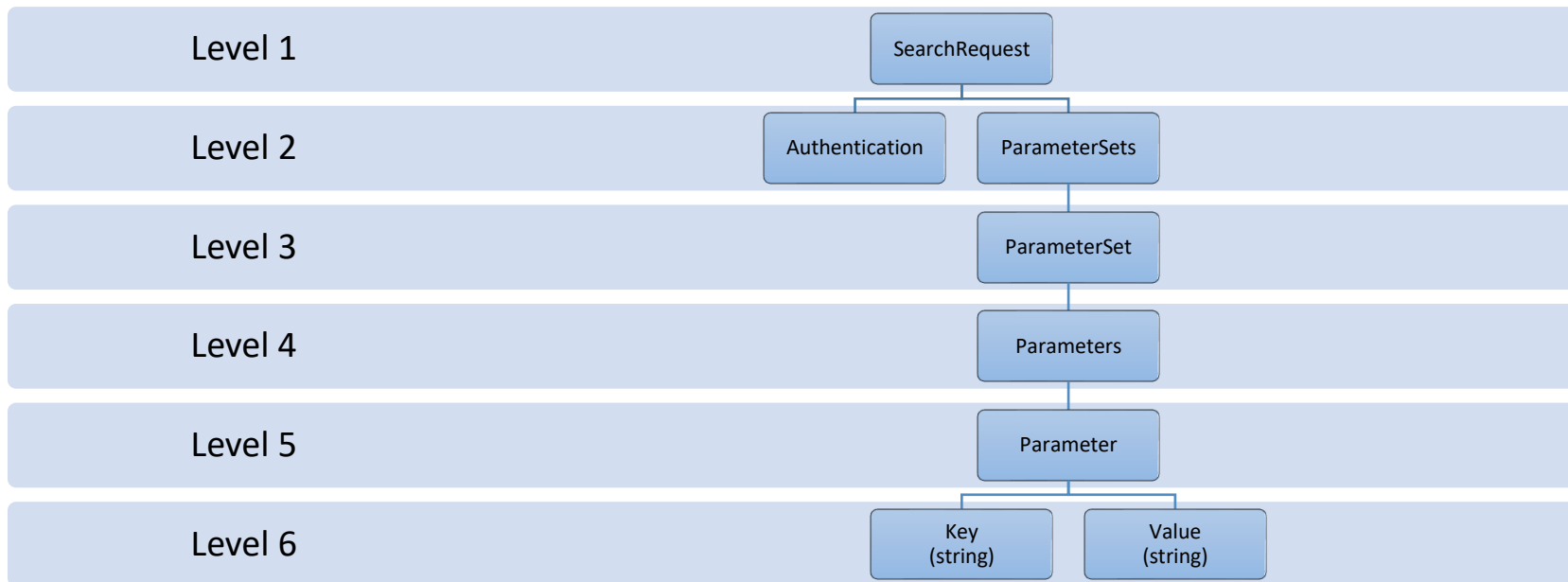


Figure 2

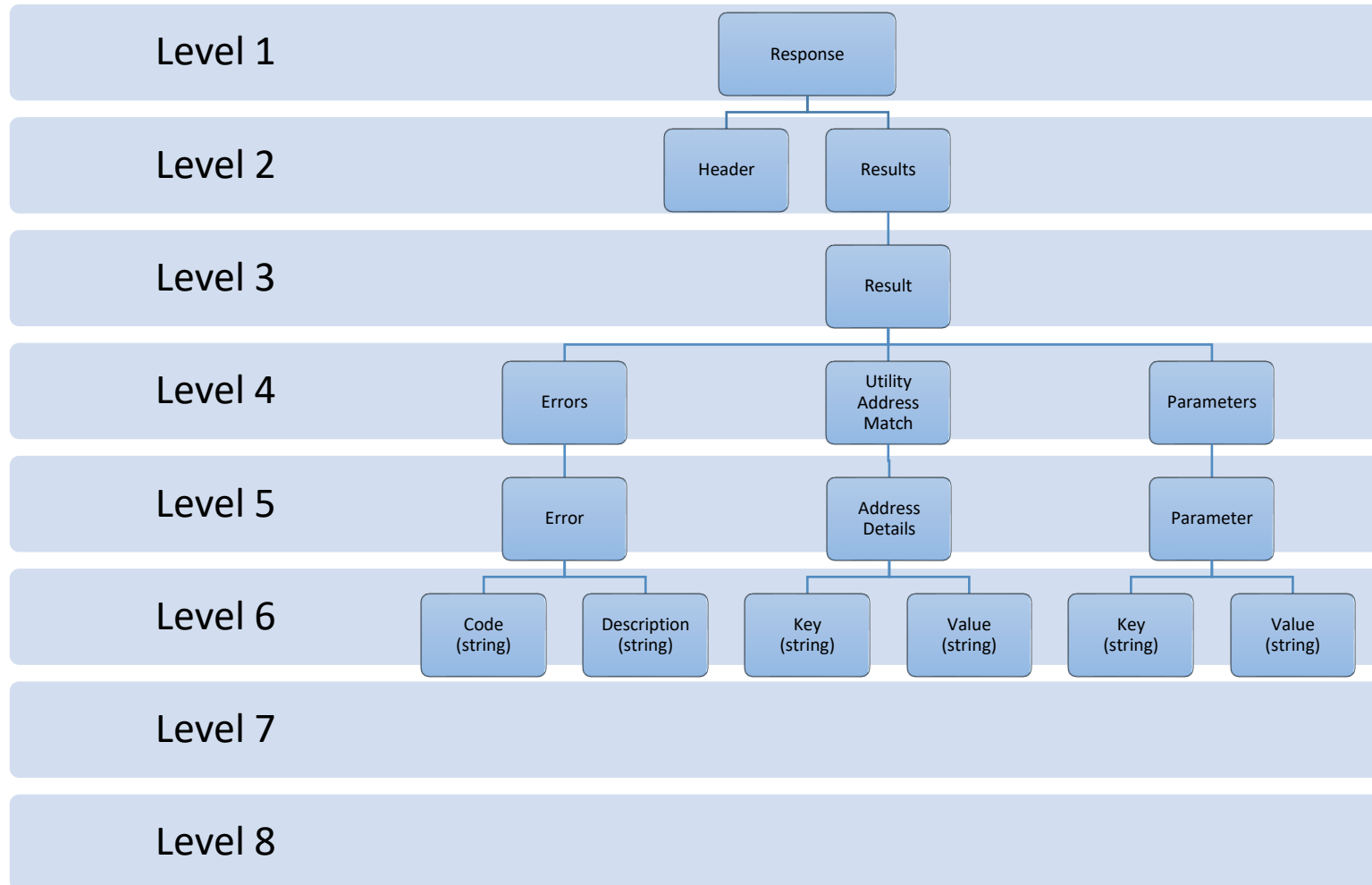
Level	Field	Description
1	SearchRequest	Mandatory. Encapsulates a request sent to the "SearchUtilityAddress" web service method.
2	Authentication	Mandatory. Encapsulates those details required in order that the web service caller authenticates themselves to the web service.
2	ParameterSets	Mandatory. A collection of "ParameterSet" objects; one for each address search to be performed by the web service.
3	ParameterSet	Encapsulates the set of parameters for an individual address search.
4	Parameters	A collection of "Parameter" objects; one for each address search parameter.
5	Parameter	Encapsulates the name and value of an individual address search parameter.
6	Key	Holds the name of the address search parameter.
6	Value	Holds the value of the address search parameter.

## Supported Parameters

Parameter Name	Description
Postcode	Optional.  This parameter must contain a minimum of three characters, which are assumed to form the out-code part of the postcode.  At least one other address search parameter must be provided if a partial postcode is supplied.
BuildingNumber	Optional; at least one other address search parameter must be provided.
SubBuilding	Optional; at least one other address search parameter must be provided.
BuildingName	Optional; at least one other address search parameter must be provided.
DependentThoroughfare	Optional; at least one other address search parameter must be provided.
ThoroughfareName	Optional; at least one other address search parameter must be provided.
DoubleDependentLocality	Optional; at least one other address search parameter must be provided.
DependentLocality	Optional; at least one other address search parameter must be provided.
PostTown	Optional; at least one other address search parameter must be provided.
MeterSerialNumber	Optional; Meter Serial Number, can be used instead of any address parameter.
ReturnDataForSingleResult	Optional. Returns the full details for a given address if only one address is returned and this parameter is set to true.  The default value for this parameter is "false".

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**Method Outputs**



**Figure 3**

Level	Field	Description
1	Response	Encapsulates the response returned by the "SearchUtilityAddress" web service method.
2	Header	<p>Holds the following web service processing details related to the request:</p> <p><b>RequestId.</b> A unique integer value generated for the request.</p> <p><b>RequestDate.</b> The date / time that the request was received by the web service.</p> <p><b>ResponseTime.</b> The time taken for the web service to process the request.</p> <p><b>VersionNumber.</b> Web service version number.</p>
2	Results	A collection of "Result" objects; one for each MPAN.
3	Result	Encapsulates the address search results, parameters and any errors that may have occurred for a requested address search.
4	Errors	A collection of "Error" objects; one for each error identified while processing a requested address search.
5	Error	Encapsulates details of an individual address search error. See Appendix A for the list of possible error codes.
6	Code	Holds the error code.
6	Description	Holds the description of the error.
4	Utility Address Details	Encapsulates the set of data items and matched addresses for an individual address search result.

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5	Utility Address Detail	A key-value pair object that encapsulates the name and value of an address search result data item.
6	Key	Holds the name of an address search result data item. See section <a href="#">7.5</a> for a list of utility address data items.  If ReturnDataForSingleAddress is true, and a single address is returned, then the data items returned match section <a href="#">8.5</a>
6	Value	Holds the value of an address search result data item.
4	Parameters	A collection of "Parameter" objects that are representative of the key-value pairs submitted when an address search was requested through the "SearchUtilityAddress" web service method.
5	Parameter	A key-value pair that encapsulates the name and value of a requested address search parameter.
6	Key	Holds the name of a requested address search parameter.
6	Value	Holds the value of a requested address search parameter.

**Returned Address Details**

\*The data that is returned to the subscriber is dependent upon their subscription.

<b>Data Item</b>	<b>Description</b>
mpan_core	MPAN core.
address_line_1	Metering Point Address Line 1
address_line_2	Metering Point Address Line 2
address_line_3	Metering Point Address Line 3
address_line_4	Metering Point Address Line 4
address_line_5	Metering Point Address Line 5
address_line_6	Metering Point Address Line 6
address_line_7	Metering Point Address Line 7
address_line_8	Metering Point Address Line 8
address_line_9	Metering Point Address Line 9
postcode	Metering Point Postcode
distributor_mpid	Distributor MPID
trading_status	MPAN trading status
gsp_group_id	Grid Supply Point Group Id

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## 8. GetTechnicalDetailsByMpan

### Method Purpose

The “GetTechnicalDetailsByMpan” method allows the web service caller to retrieve the utility technical details for a given MPAN. Multiple MPANs can be specified in a single request, which allows the technical details for each MPAN to be retrieved in a single call.

### Method Inputs

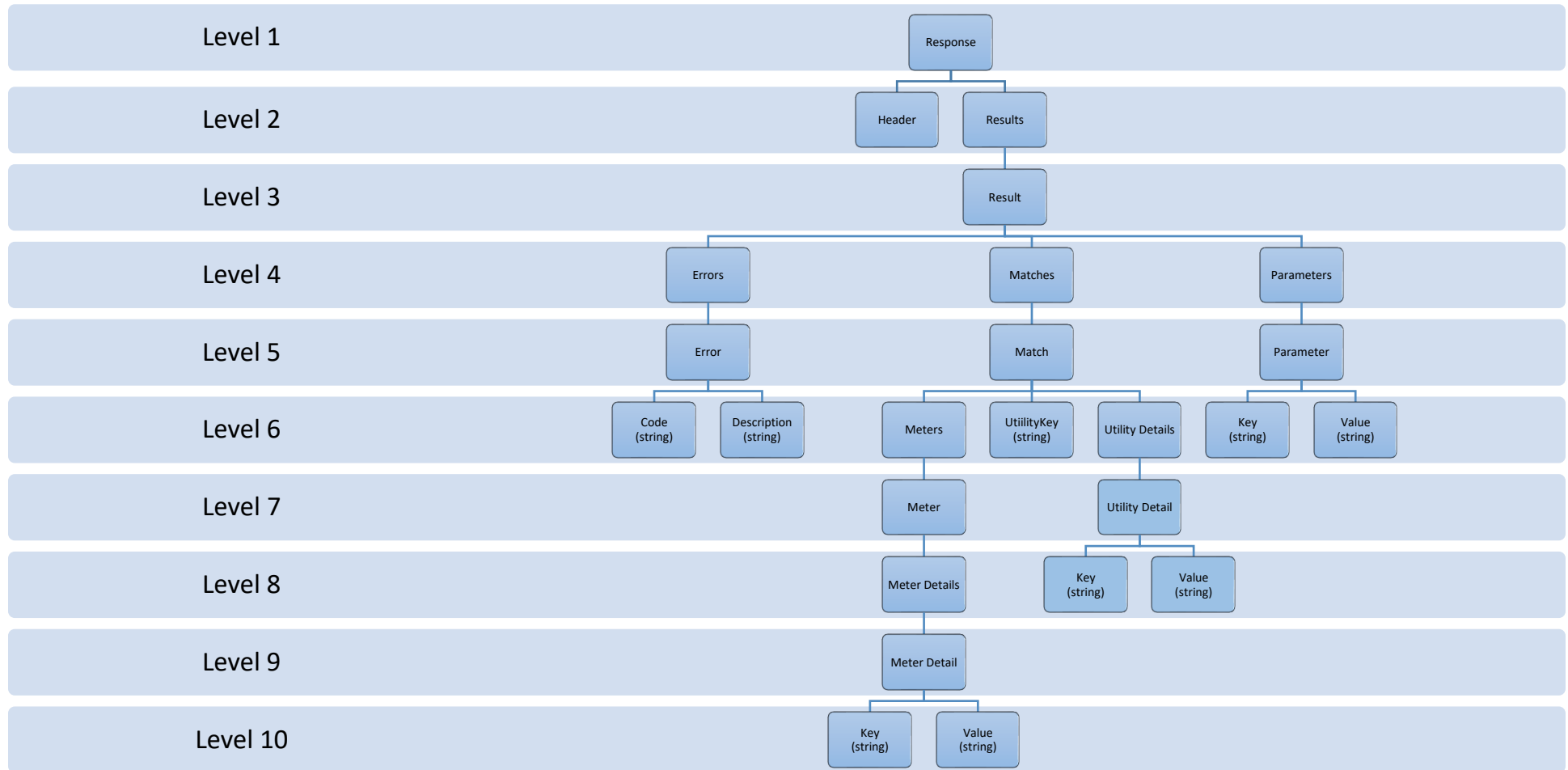
The structure of the input expected for the “GetTechnicalDetailsByMpan” web service method is the same as that for the “SearchUtilityAddress” web service method. However, the parameters supported for this web service method are different.

### Supported Parameters

Parameter Name	Description
MPAN	Mandatory



**1. Method Outputs**



**Figure 4**

Level	Field	Description
1	Response	Encapsulates the response returned by the “GetTechnicalDetailsByMpan” web service method.
2	Header	Holds the following web service processing details related to the request:  RequestId. A unique integer value generated for the request.  RequestDate. The date / time that the request was received by the web service.  ResponseTime. The time taken for the web service to process the request.  VersionNumber. Web service version number.
2	Results	A collection of “Result” objects; one for each requested mpan.
3	Result	Encapsulates the utility technical details for a requested mpan.
4	Errors	A collection of “Error” objects; one for each error identified while processing a requested technical details search.
5	Error	Encapsulates details of an individual technical details search error. See section Appendix A for the list of possible error codes.
6	Code	Holds the error code.
6	Description	Holds the description of the error.
4	Matches	A collection of “Match” objects; one for each discovered utility key.
5	Match	Encapsulates the data items associated with a utility key, the potentially related utility keys, and where appropriate, any associated meter details.
6	Meters	A collection of “Meter” objects; one for each set of meter details found for a given utility key. The availability of metering data is subject to utility type.
7	Meter	Encapsulates meter details found for a given MPAN.
8	Meter Details	A collection of key-value pair objects; one for each data item returned for a given meter. See section <b>Error! Reference source not found.</b> for the list of metering data items that are returned.
9	Meter Detail	A key-value pair that holds the details of an individual meter data item.
10	Key	Holds the key associated with a meter data item.

10	Value	Holds the value of a meter data item.
6	UtilityKey	Hold the discovered utility key value.
6	Utility Details	A collection of "Utility Detail" objects; one for each technical detail data item for the discovered utility key.
7	Utility Detail	A key-value pair that encapsulates the details of an individual technical detail data item for a discovered utility key. See below for the list of technical detail data items that can be returned by this web service method.
8	Key	Holds the name of the technical detail data item.
8	Value	Holds the value of the technical detail data item.
4	Parameters	A collection of "Parameter" objects that are representative of the key-value pairs submitted when an mpan technical detail search was requested through the "GetTechnicalDetailsByMpan" web service method.
5	Parameter	A key-value pair that encapsulates the name and value of a requested address search parameter.
6	Key	Holds the name of a requested address search parameter.
6	Value	Holds the value of a requested address search parameter.

## 2. Returned Technical Detail Data Items

\*The data that is returned to the subscriber is dependent upon their subscription.

Data Item	Description
mpan_core	MPAN core.
address_line_1	Metering Point Address Line 1
address_line_2	Metering Point Address Line 2
address_line_3	Metering Point Address Line 3
address_line_4	Metering Point Address Line 4
address_line_5	Metering Point Address Line 5
address_line_6	Metering Point Address Line 6
address_line_7	Metering Point Address Line 7
address_line_8	Metering Point Address Line 8
address_line_9	Metering Point Address Line 9
Postcode	Metering Point Postcode

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distributor_mpid	Distributor MPID	
trading_status	MPAN trading status	
trading_status_efd	MPAN trading status effective from date	
gsp_group_id	Grid Supply Point Group Id	
gsp_group_efd	Grid Supply Point Group effective from date	
line_loss_factor	Line Loss Factor Class	
line_loss_factor_efd	Line Loss Factor Class effective from date	
dcc_service_flag	Data Communications Company Service Flag	
dcc_service_flag_efd	Data Communications Company Service Flag effective from date	
green_deal_in_effect	True	A Green Deal is currently active for this MPAN
	False	A Green Deal is not currently active for this MPAN
supplier_mpid	Supplier MPID	
supplier_efd	Effective from date of the current supplier	
energisation_status	Energisation status	
energisation_status_efd	Energisation status effective from date	
profile_class	Profile Class	
profile_class_efd	Profile Class effective from date	
standard_settlement_configuration	Standard Settlement Configuration	
standard_settlement_configuration_efd	Standard Settlement Configuration effective from date	
meter_timeswitch_class	Meter Time-switch Class	
meter_timeswitch_class_efd	Meter Time-switch Class effective from date	
measurement_class	Measurement Class	
measurement_class_efd	Measurement class effective from date	
data_aggregator_mpid	Data Aggregator MPID	
data_aggregator_efd	Data Aggregator appointment effective from date	
data_collector_mpid	Data Collector MPID	
data_collector_efd	Data Collector appointment effective from date	
meter_operator_mpid	Meter Operator MPID	
meter_operator_efd	Meter Operator appointment effective from date	

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smso_mpid	Smart Metering System Operator MPID
smso_efd	Smart Metering System Operator effective from date
ihd_status	In Home Display Install status
ihd_status_efd	In Home Display Install status effective from date
smets_version	Smart Metering Equipment Technical Specification version
metered_indicator	Metered Indicator
metered_indicator_efd	Metered Indicator effective from date
metered_indicator_etd	Metered Indicator effective to date
consumer_type	Consumer Type
domestic_consumer_indicator	Domestic Consumer Indicator
relationship_status_indicator	Relationship Status Indicator
rmp_state	RMP State
rmp_state_efd	RMP State effective from date

### Returned CCS Data Items

The data that is returned to the subscriber is dependent upon their subscription.

Data Item	Description
css_supplier_mpid	Current supplier as supplied via CSS messages
css_supply_start_date	Current supply start date as supplier via CSS messages

### Returned Metering Data Items

\*The data that is returned to the subscriber is dependent upon their subscription.

Data Item	Description
mpancore	MPAN Core
installing_supplier_mpid	Installing Supplier MPID



MRA Service Company

meter_serial_number	Meter Serial Number
meter_type	Meter Type
meter_install_date	Meter Install Date
map_mpid	Meter Asset Provider MPID

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## 9. GetErrorCodes

### Method Purpose

The “GetErrorCodes” web service method returns a list of error codes used by the web service (see Appendix A - Error Codes).

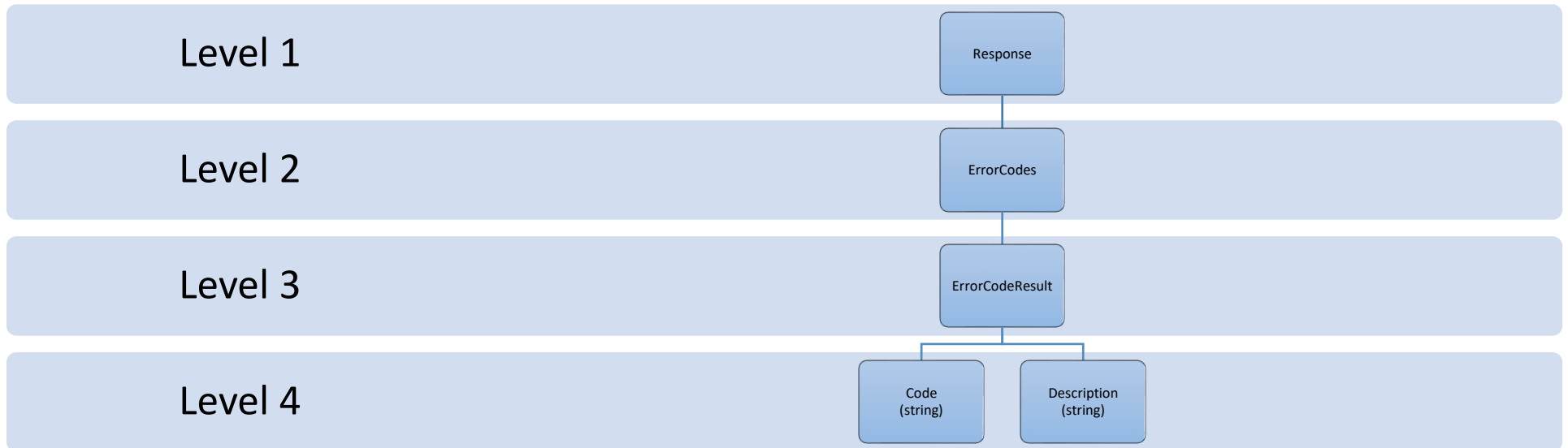
### Method Inputs



Figure 5

Level	Field	Description
1	AuthRequest	Mandatory. Encapsulates a request to the “GetErrorCodes” web service method.
2	Authentication	Mandatory. Encapsulates those details required in order that the web service caller authenticates themselves to the web service. See Web Service Security for more information.

**Method Outputs**



**Figure 6**

Level	Field	Description
1	Response	Encapsulates response returned by the “GetErrorCodes” web service method.
2	ErrorCodes	A collection of “ErrorCodeResult” objects; one for each error code defined for the web service.
3	ErrorCodeResult	Encapsulates an error code defined for the web service.
4	Code	The code for the defined error.
4	Description	The description of the defined error.



## 10. GetSubscriberMethodLimits

### Method Purpose

The “GetSubscriberMethodLimits” method returns the list of method limits, and current usage for a particular subscriber.

### Method Inputs

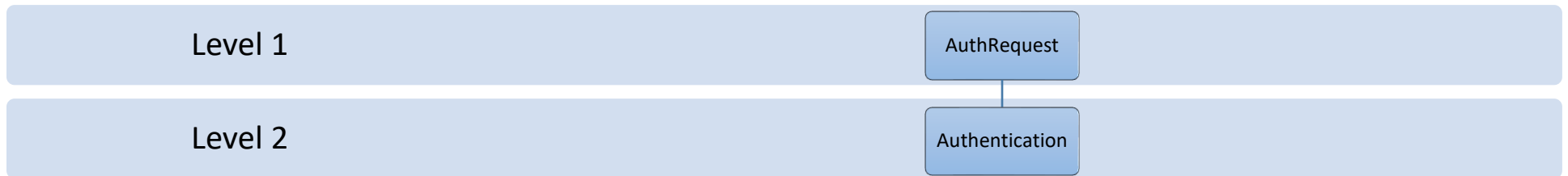
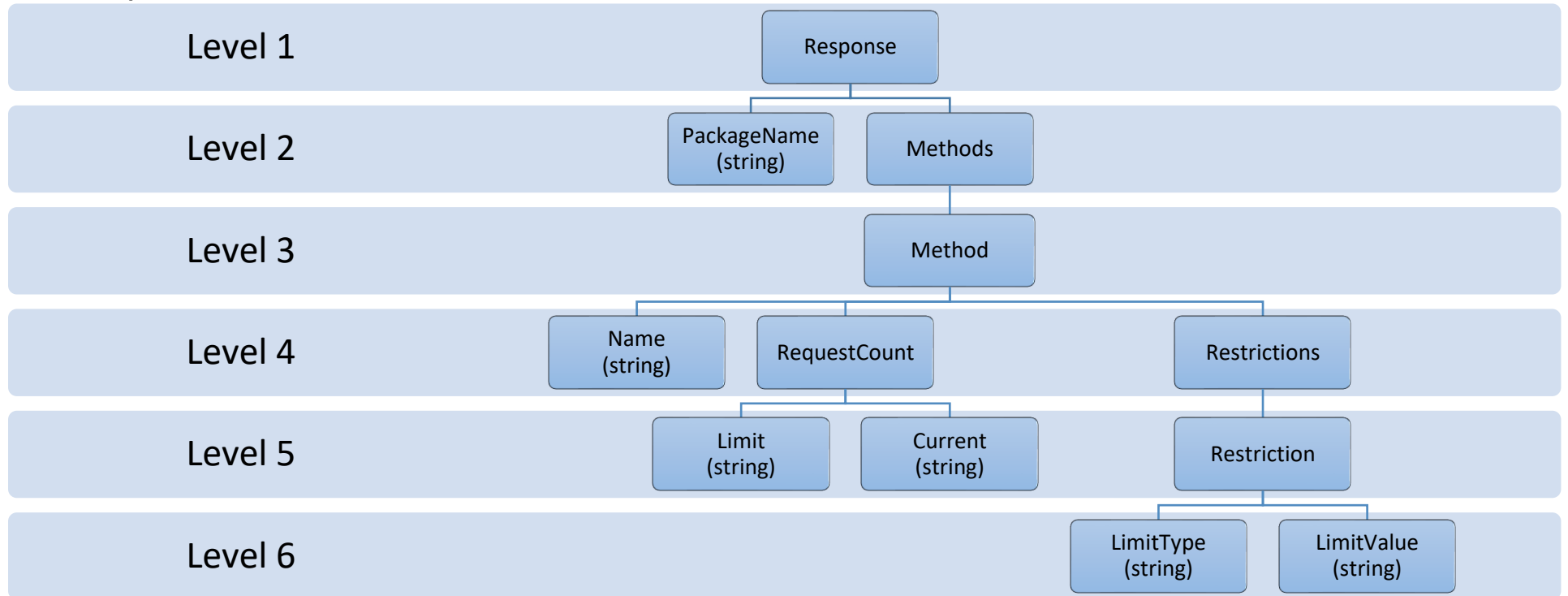


Figure 7

Level	Field	Description
1	AuthRequest	Mandatory. Encapsulates a request to the “GetSubscriberMethodLimits” web service method.
2	Authentication	Mandatory. Encapsulates those details required in order that the web service caller authenticates themselves to the web service. See Web Service Security for more information.

**Method Outputs**



**Figure 8**

Level	Field	Description								
1	Response	Encapsulates the response from the "GetSubscriberMethodLimits" web service method.								
2	PackageName	Holds the name of the service plan for the subscription associated with the web service caller.								
2	Methods	A collection of "Method" objects; one for each web service method to which the subscriber has access.								
3	Method	Encapsulates the request count and limits for a web service method accessible to the subscriber.								
4	Name	Name of the web service method.								
4	RequestCount	Encapsulates the limit and number of requests made for a given web service method.								
5	Limit	Holds the request limit for a given web service method, for the calling subscriber.								
5	Current	Holds the current number of requests made for a given web service method, for the calling subscriber.								
4	Restrictions	A collection of "Restriction" objects; one for each restriction defined for a given web service method, for the calling subscriber.								
5	Restriction	Encapsulates a restriction defined for a given web service method, for the calling subscriber.								
6	LimitType	Holds the type name of the restriction. The type name can be one of the following values. <table border="1" data-bbox="589 746 2051 879"> <thead> <tr> <th>Limit Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>MAX_PARAM_INPUT</td> <td>Determines the maximum number of input parameters for a method</td> </tr> <tr> <td>MAX_RESULT_OUTPUT</td> <td>Determines the maximum number of results return from a request</td> </tr> <tr> <td>MAX_REQUEST_PER_MONTH</td> <td>Specifies the maximum number of monthly requests that can be made to this entity</td> </tr> </tbody> </table>	Limit Type	Description	MAX_PARAM_INPUT	Determines the maximum number of input parameters for a method	MAX_RESULT_OUTPUT	Determines the maximum number of results return from a request	MAX_REQUEST_PER_MONTH	Specifies the maximum number of monthly requests that can be made to this entity
Limit Type	Description									
MAX_PARAM_INPUT	Determines the maximum number of input parameters for a method									
MAX_RESULT_OUTPUT	Determines the maximum number of results return from a request									
MAX_REQUEST_PER_MONTH	Specifies the maximum number of monthly requests that can be made to this entity									
6	LimitValue	Holds the defined restriction value.								

## 11. GetRelatedMPANs

### Method Purpose

The “GetRelatedMPANs” method returns relationship data for a given MPAN. The method will return all MPANs that are either of a secondary or primary relationship to the given MPAN. The method will act upon only one given parameter set.

### Method Inputs

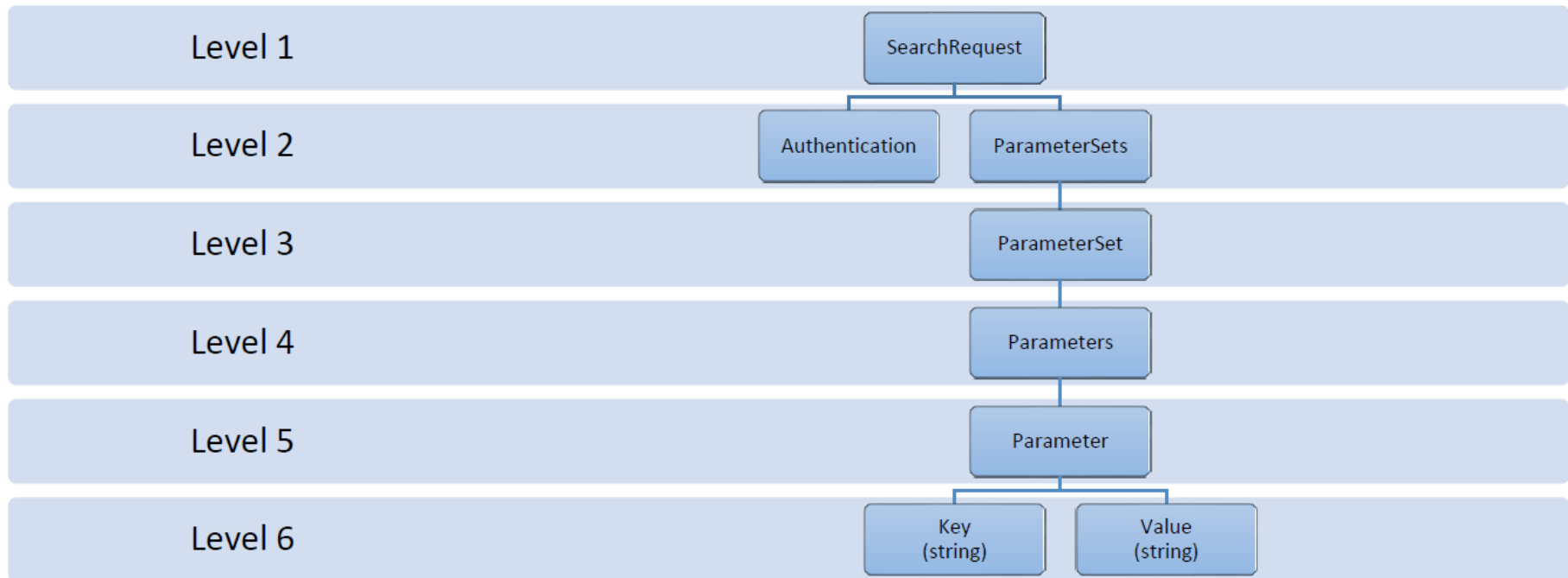
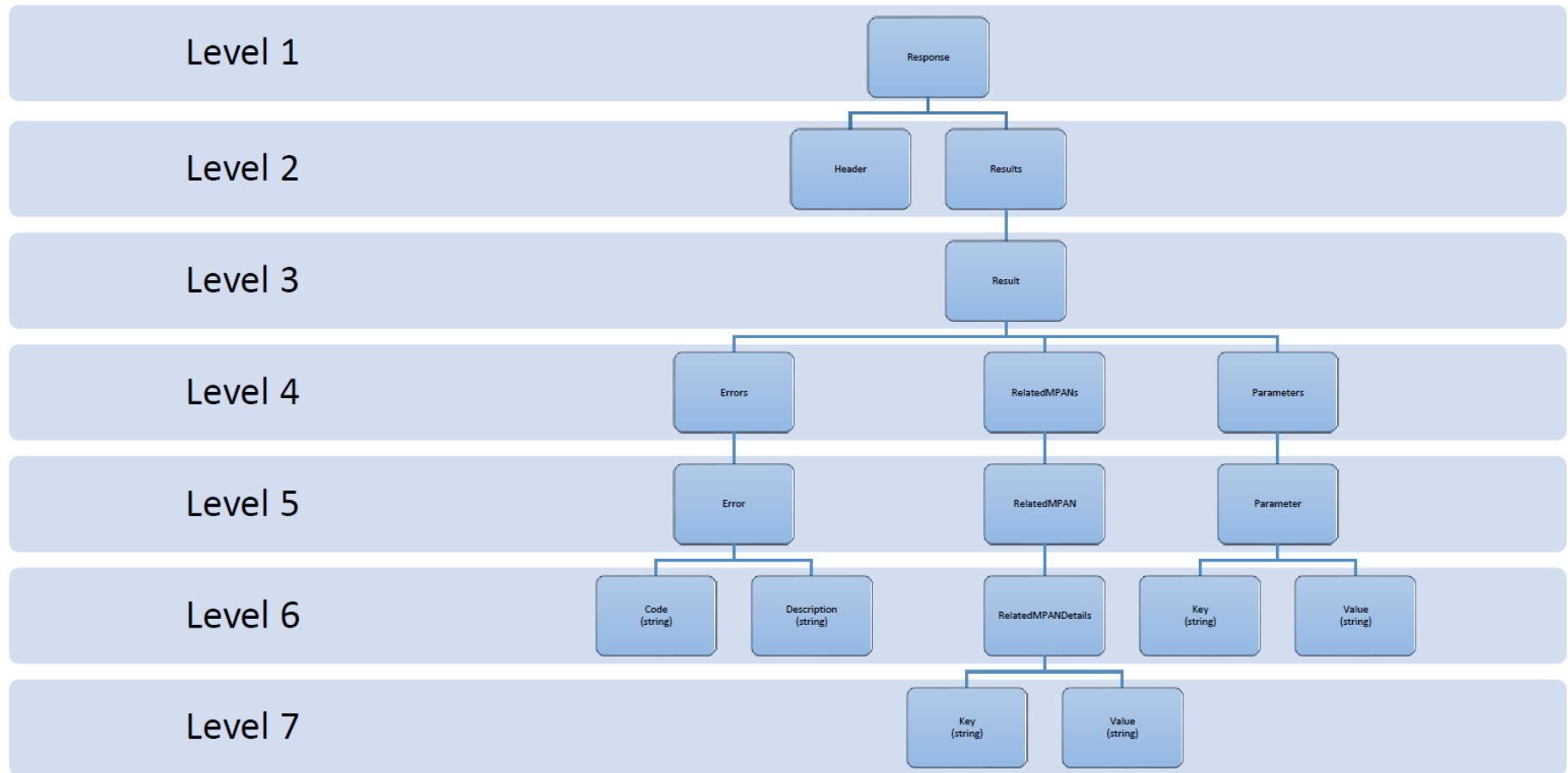


Figure 9

**Supported Parameters**

Parameter Name	Description
MPAN	Mandatory.

**Method Outputs**



**Figure 10**

Level	Field	Description
1	Response	Encapsulates the response returned by the "GetTechnicalDetailsByMpan" web service method.
2	Header	<p>Holds the following web service processing details related to the request:</p> <p><b>RequestId.</b> A unique integer value generated for the request.</p> <p><b>RequestDate.</b> The date / time that the request was received by the web service.</p> <p><b>ResponseTime.</b> The time taken for the web service to process the request.</p> <p><b>VersionNumber.</b> Web service version number.</p>
2	Results	A collection of "Result" objects; one for each requested mpan.
3	Result	Encapsulates the utility technical details for a requested mpan.
4	Errors	A collection of "Error" objects; one for each error identified while processing a requested technical details search.
5	Error	Encapsulates details of an individual technical details search error. See section Appendix A for the list of possible error codes.
6	Code	Holds the error code.
6	Description	Holds the description of the error.
4	RelatedMPANs	Encapsulates each of the related MPAN records found.

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5	RelatedMPAN	Encapsulates the details collection of each MPAN record, one for each MPAN found
6	RelatedMPANDetails	A collection of details relating to the found MPAN
7	Key	Holds the name of a data item.
7	Value	Holds the value of a data item.
4	Parameters	Encapsulates the Parameter objects.
5	Parameter	Parameter object.
6	Key	Holds the name of a requested search parameter.
6	Value	Holds the value of a requested search parameter.

### Returned Address Details

Data Item	Data Item Type	Nullable	Max Length	Possible Values	Example Values
primary_mpan	Decimal	False	13		1899914439999
primary_type	String	False	9	PRIMARY	
primary_reference	String	False	15		P_MPID00009999
primary_relationship_reference	String	False	15		P_MPID00009991
primary_supplier	String	False	4		SUPL



primary_efd	Date	False	8		20190712
primary_etd	Date	True	8		20190712
secondary_mpan	Decimal	False	13		1899914438888
secondary_type	String	False	9	SECONDARY	
secondary_reference	String	False	15		S_MPID00009999
secondary_relationship_reference	String	False	15		S_MPID00009991
secondary_supplier	String	False	4		SUPP
secondary_efd	Date	False	8		20190712
secondary_etd	Date	True	8		20190712

## 12. GetRELAddresses

This method will not be available until Faster Switching go-live in 2022.

### Method Purpose

The “GetRELAddresses” method allows the web service caller to retrieve the current Retail Energy Location (REL) data for a given MPAN. This data is delivered to ECOES from the Central Switching Service (CSS).

The REL data received on the latest RetailEnergyLocationSynchronisation, as determined by Event Date, is returned. Historic REL data is not returned.

Only data for the given MPAN is returned, data is not returned for other MPANs with a UPRN matching that of the given MPAN.

The search request object will carry the standard, extensible hierarchy as applicable to other API methods.

### Method Inputs

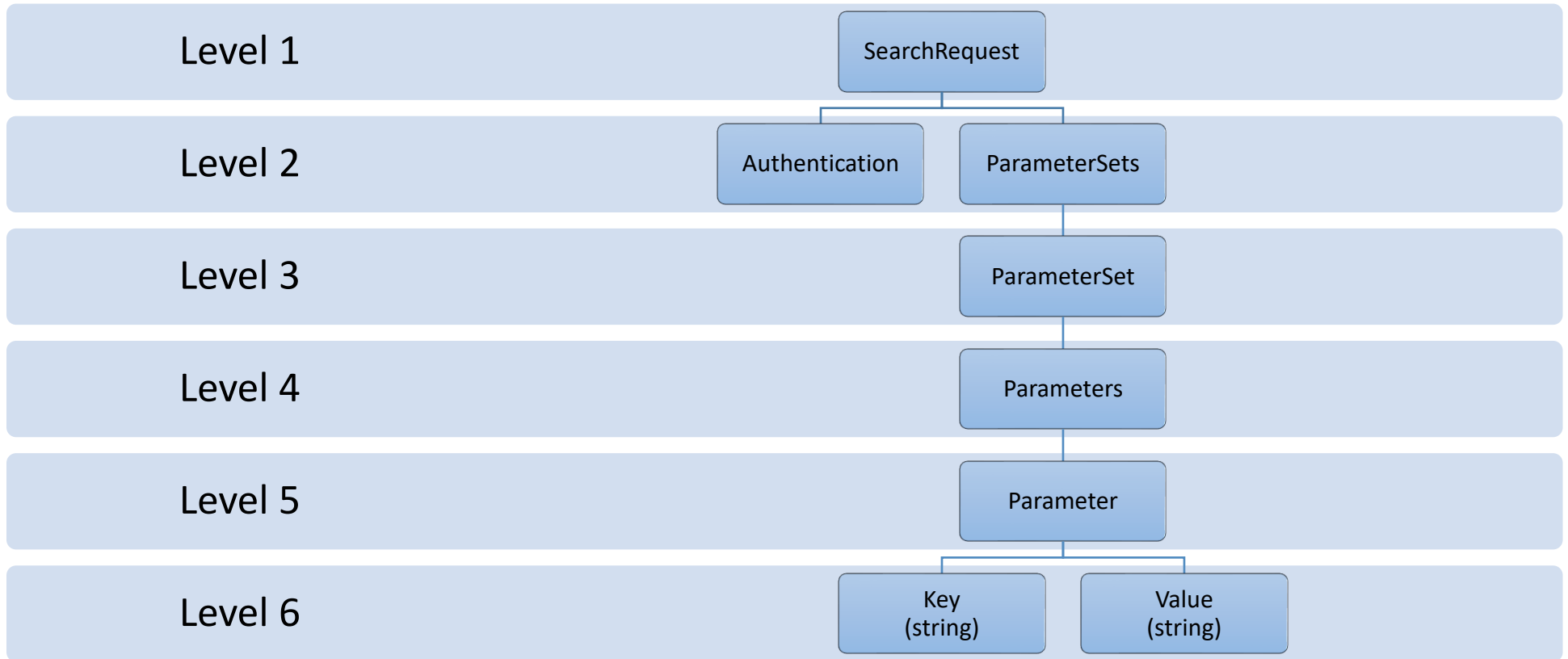
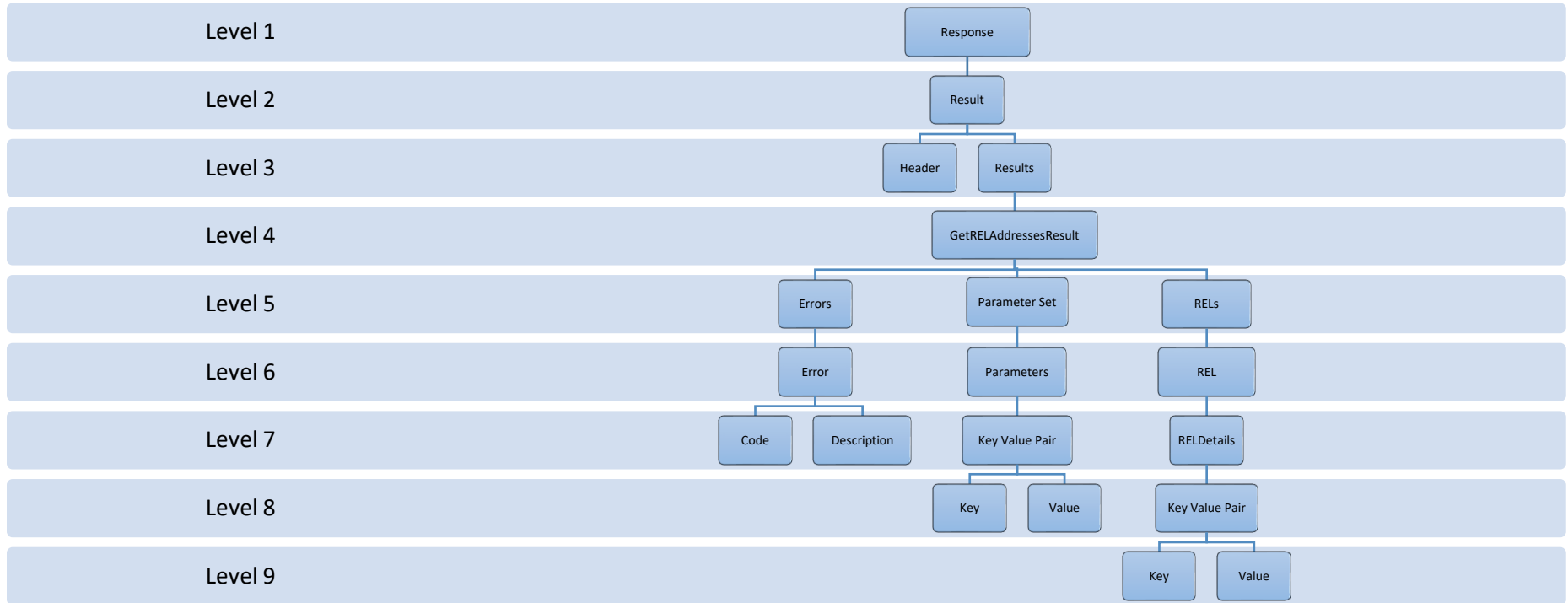


Figure 11

## Supported Parameters

Parameter Name	Description
RELPermission	Holds a Boolean value that indicates whether the process calling the web service has permission to view the REL Addresses data as per the requirements of Ordnance Survey's Retail Energy Location Licence. If this field does not hold a value of "true", then a message will be returned: <b>The RELPermission parameter must be set to "true"</b> . The default value for this parameter is "false".
MPAN	Mandatory.

**Method Outputs**



**Figure 12**

Level	Field	Description
1	Response	Encapsulates the response returned by the “GetRELAddresses” web service method.
2	Result	Encapsulates the result returned by the “GetRELAddresses” web service method.
3	Header	Holds the following web service processing details related to the request: RequestId. A unique integer value generated for the request.

		<p>RequestDate. The date / time that the request was received by the web service.</p> <p>ResponseTime. The time taken for the web service to process the request.</p> <p>VersionNumber. Web service version number.</p>
3	Results	A collection of "Result" objects.
4	GetRELAddressesResult	Encapsulates the REL for a requested MPAN together with an errors collection and the Parameter Set from the request.
5	Errors	A collection of "Error" objects.
6	Error	Encapsulates details of an individual error. See section Appendix A for the list of possible error codes.
7	Code	Holds the error code.
7	Description	Holds the error description.
5	Parameter Set	The Parameter Set from the request.
6	Parameters	Encapsulates the Parameter objects.
7	Key Value Pair	Holds a parameter data item key and value. As a pair.
8	Key	Holds the name of a requested search parameter.
8	Value	Holds the value of a requested search parameter.
5	RELS	Encapsulates the REL objects.
6	REL	Encapsulates the RELDetails object.
7	RELDetails	Holds a collection of key value pair data items.
8	Key Value Pair	Holds a REL data item key and value.
9	Key	Holds the name of a REL data item.
9	Value	Holds the value of a REL data item.

**Data Items**

The following data items will be returned:

Data Item	Data Item Type	Nullable	Max Length	Possible Values	Example Values
mpan	Numeric	False	13		1591017864341
rel_updated_date	Date	False	N/A		2021-02-18 10:07:20.000
rel_address_source	String	False	255		MPL
rel_uprn	Numeric	False	N/A		4
secondary_name	String	True	255		Carloli House
primary_name	String	True	255		21
street_1	String	True	255		Witton Grove
street_2	String	True	255		Witton Grove East
locality_1	String	True	255		Durham
locality_2	String	True	255		Durham East
town	String	True	255		Pity Me
postcode	String	True	8		DH1 6AD
logical_status	Numeric	True	N/A		1

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language	String	True	3		ENG
organisation	String	True	255		ECONOGROUP
address_type	String	True	3		DPA
confidence_score	Numeric	True	N/A		100
classification	String	True	6		RD06
latitude	Numeric	True	N/A		1.0000
longitude	Numeric	True	N/A		1.0000



### **13. SearchRELAddresses**

This method will not be available until Faster Switching go-live in 2022.

#### **Method Purpose**

The “SearchRELAddress” method allows the web service caller to retrieve the current REL data for a single UPRN matching the given parameters. The search is performed against all current REL data. Current REL data is that which was received on the latest RetailEnergyLocationSynchronisation message, as determined by Event Date. Historical REL data will not be searched against.

This method only returns a result if the search matches a single REL UPRN. Error code DAT2480 is returned if the search criteria match multiple REL UPRNs.

Only REL data is returned by this method, no MPL address data is returned.

The search request object will carry the standard, extensible hierarchy as applicable to other API methods.

### Method Inputs

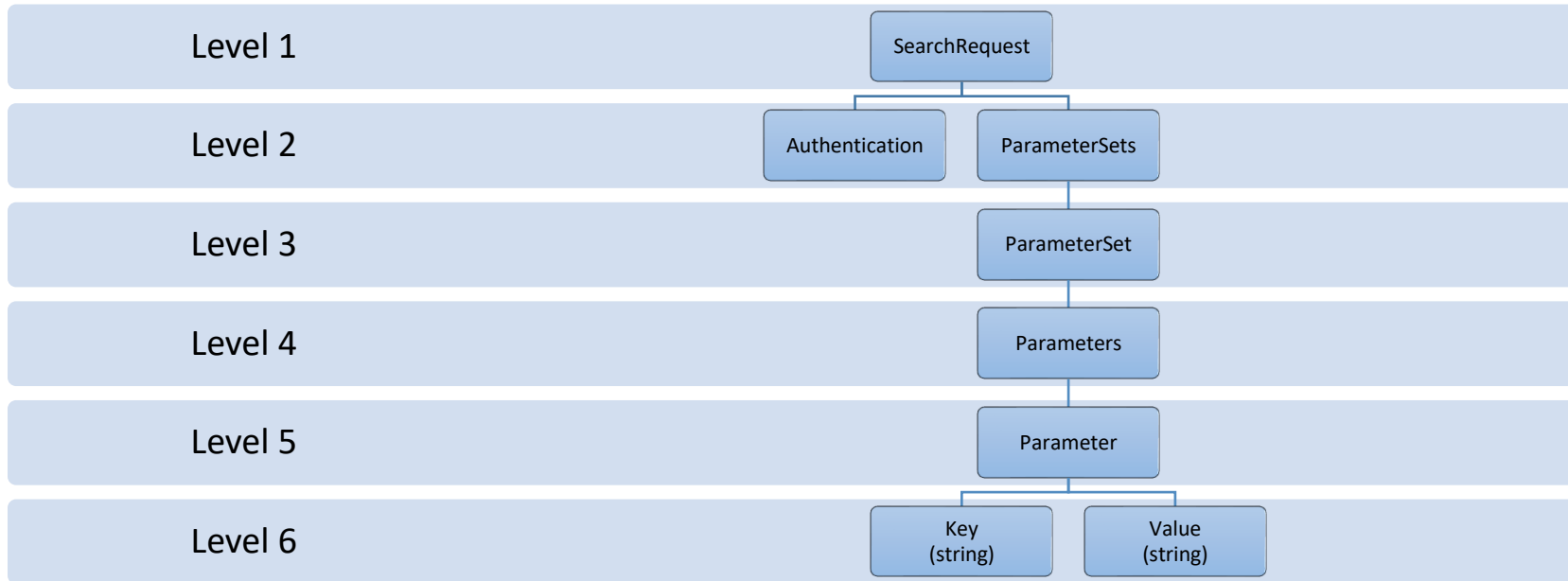
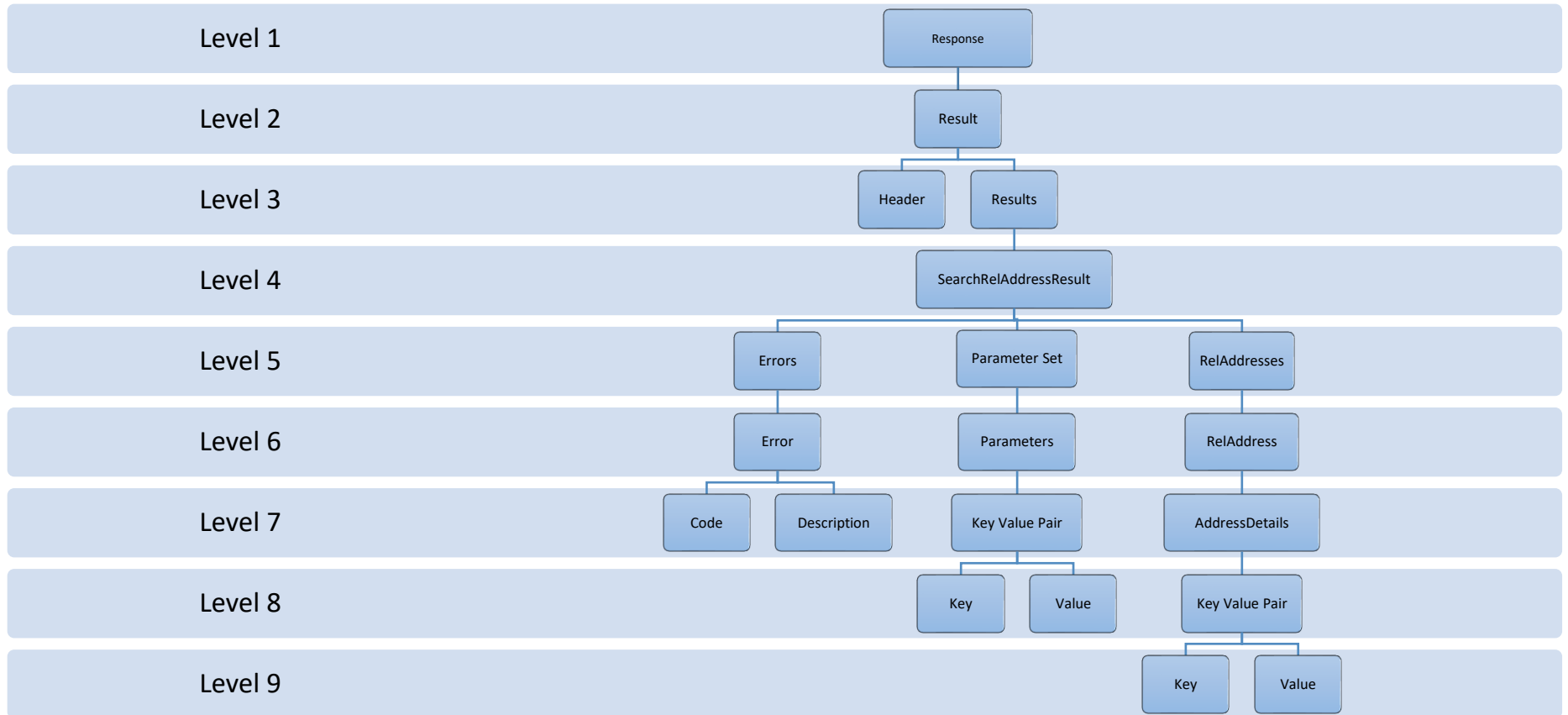


Figure 13

## Supported Parameters

Parameter Name	Description
RELPermission	Optional. Holds a Boolean value that indicates whether the process calling the web service has permission to use the REL Addresses data as per the requirements of Ordnance Survey's Retail Energy Location Licence. If this field does not hold a value of "true", then a message will be returned: <b>The RELPermission parameter must be set to "true"</b> . The default value for this parameter is "false".
SearchTerm	Optional. A string to match the REL address data with.
Postcode	Optional. Full or partial postcode.

**Method Outputs**



**Figure 14**

Level	Field	Description
1	Response	Encapsulates the response returned by the "GetRELAddresses" web service method.
2	Result	Encapsulates the result returned by the "GetRELAddresses" web service method.
3	Header	Holds the following web service processing details related to the request: RequestId. A unique integer value generated for the request. RequestDate. The date / time that the request was received by the web service. ResponseTime. The time taken for the web service to process the request. VersionNumber. Web service version number.
3	Results	A collection of "Result" objects.
4	SearchRelAddressResult	Encapsulates the REL for a requested MPAN together with an errors collection and the Parameter Set from the request.
5	Errors	A collection of "Error" objects.
6	Error	Encapsulates details of an individual error. See section Appendix A for the list of possible error codes.
7	Code	Holds the error code.
7	Description	Holds the error description.
5	Parameter Set	The Parameter Set from the request.
6	Parameters	Encapsulates the Parameter objects.
7	Key Value Pair	Holds a parameter data item key and value. As a pair.
8	Key	Holds the name of a requested search parameter.
8	Value	Holds the value of a requested search parameter.
5	RelAddresses	Encapsulates the RelAddress objects.
6	RelAddress	Encapsulates the AddressDetails object.
7	AddressDetails	Holds a collection of key value pair data items.
8	Key Value Pair	Holds a REL data item key and value.
9	Key	Holds the name of a REL data item.
9	Value	Holds the value of a REL data item.

**Data Items**

The following data items will be returned:

Data Item	Data Item Type	Nullable	Max Length	Possible Values	Example Values
uprn	Numeric	False	N/A		4
mpan	Numeric	False	13		1591017864341
rel_address_source	String	False	255		MPL
secondary_name	String	True	255		Carloli House
primary_name	String	True	255		21
street_1	String	True	255		Witton Grove
street_2	String	True	255		Witton Grove East
locality_1	String	True	255		Durham
locality_2	String	True	255		Durham East
town	String	True	255		Pity Me
postcode	String	True	8		DH1 6AD
logical_status	Numeric	True	N/A		1
language	String	True	3		ENG
organisation	String	True	255		ECONOGROUP

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address_type	String	True	3		DPA
confidence_score	Numeric	True	N/A		100
classification	String	True	6		RD06
latitude	Numeric	True	N/A		1.0000
longitude	Numeric	True	N/A		1.0000
rel_updated_date	Date	False	N/A		2021-02-18 10:07:20.000

## 14. **GetCSSMessages**

This method will not be available until Faster Switching go-live in 2022.

The “GetCSSMessages” method allows the caller to retrieve the CSS messages for a given MPAN received within the last 90 days.

The method allows the caller to narrow down their search by Event Type, Event Date. If a date range greater than 90 days is given, the method will still only return data from the last 90 days.

The data items listed below will be returned for all Event Types, however, they will only be populated if they form part of the defined structure for that Event Type message. If the data item does not form part of the Event Type message structure it will be returned with an empty string value.

**No** REL data relating to the RetailEnergyLocationSynchronisation message will be returned by this method. Only MPAN Core, Event Type, Event Date and Event Status will be populated for this message type.



### Method Inputs

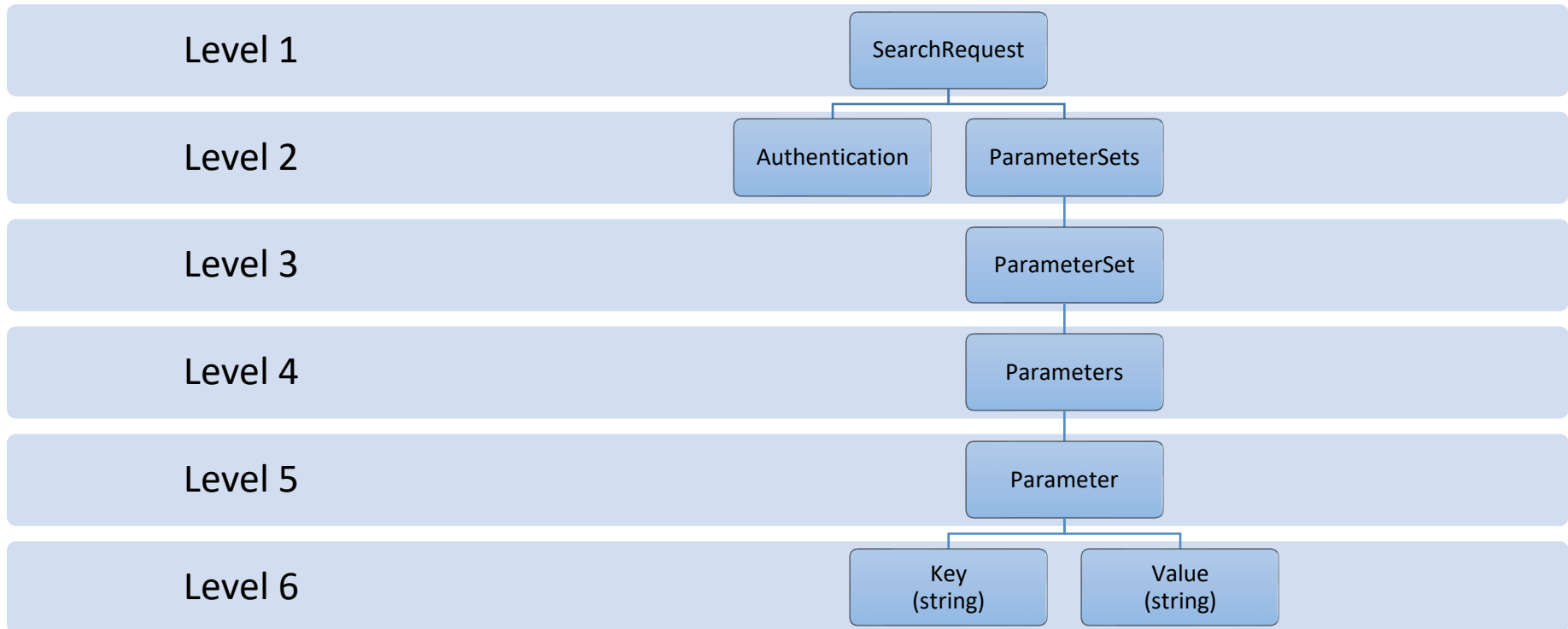
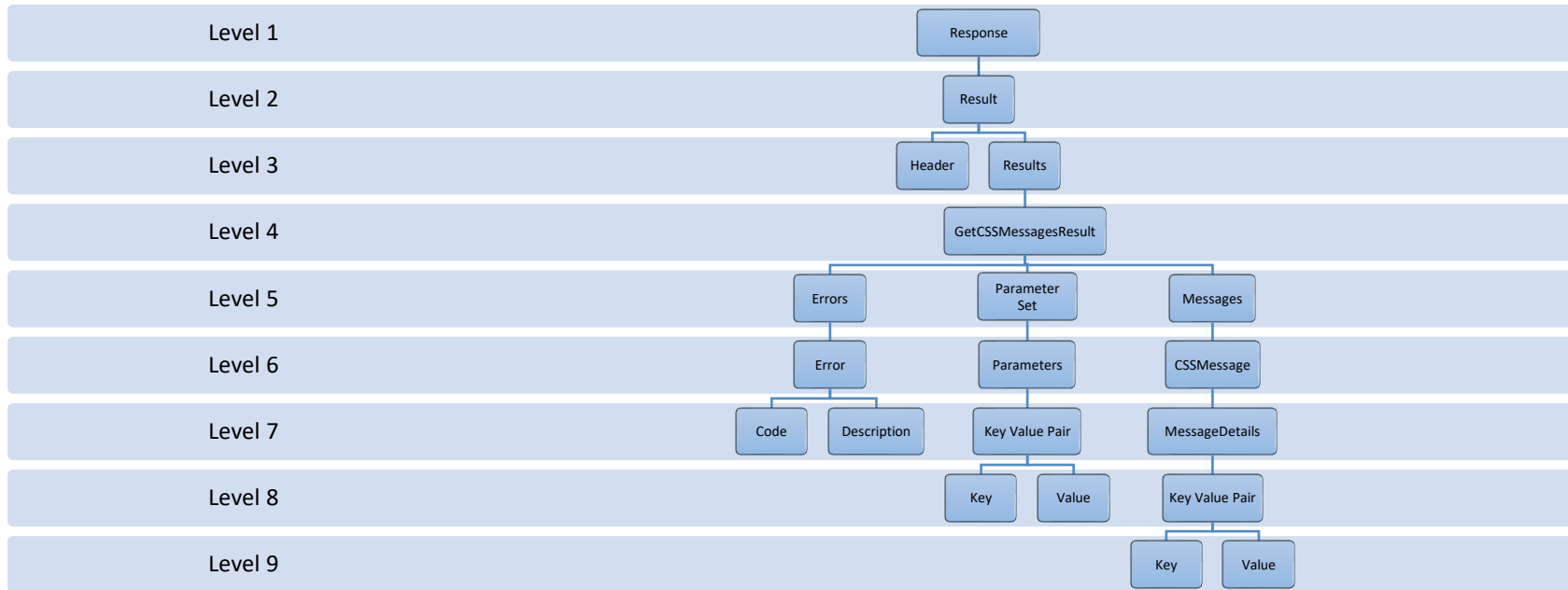


Figure 15

**Supported Parameters**

<b>Parameter Name</b>	<b>Description</b>
MPAN	Mandatory.
Event Type	Optional.  <b>Accepted values:</b>  RegistrationSecuredInactiveSynchronisation  RegistrationEventSynchronisation  RegistrationPendingSynchronisation  RegistrationCancelledSynchronisation  RegistrationSecuredActiveSynchronisation  RetailEnergyLocationSynchronisation
Event Date From	Optional.
Event Date To	Optional.

**Method Outputs**



**Figure 16**

Level	Field	Description
1	Response	Encapsulates the response returned by the “GetRELAddresses” web service method.
2	Result	Encapsulates the result returned by the “GetRELAddresses” web service method.
3	Header	Holds the following web service processing details related to the request: RequestId. A unique integer value generated for the request. RequestDate. The date / time that the request was received by the web service. ResponseTime. The time taken for the web service to process the request. VersionNumber. Web service version number.
3	Results	A collection of “Result” objects.
4	GetCSSMessagesResult	Encapsulates the CSS Messages for a requested MPAN together with an errors collection and the Parameter Set from the request.
5	Errors	A collection of “Error” objects.
6	Error	Encapsulates details of an individual error. See section Appendix A for the list of possible error codes.
7	Code	Holds the error code.
7	Description	Holds the error description.
5	Parameter Set	The Parameter Set from the request.
6	Parameters	Encapsulates the Parameter objects.
7	Key Value Pair	Holds a parameter data item key and value. As a pair.
8	Key	Holds the name of a requested search parameter.
8	Value	Holds the value of a requested search parameter.
5	Messages	Encapsulates the CSSMessage objects.
6	CSSMessage	Encapsulates the MessageDetails object.
7	MessageDetails	Holds a collection of key value pair data items.
8	Key Value Pair	Holds a REL data item key and value.
9	Key	Holds the name of a REL data item.
9	Value	Holds the value of a REL data item.

**Data Items**

The following data items will be returned:

Data Item	Data Item Type	Nullable	Max Length	Possible Values	Example Values
mpan_core	Numeric	False	13		1591017864341
event_type	String	True	255	RegistrationSecuredInactiveSynchronisation RegistrationEventSynchronisation RegistrationPendingSynchronisation RegistrationCancelledSynchronisation RegistrationSecuredActiveSynchronisation RetailEnergyLocationSynchronisation	RegistrationSecuredInactiveSynchronisation
event_date	Date	True	N/A		2021-02-18 10:07:20.000
event_status	String	True	255		Ok
fuel_type	String	True	1		E
registration_id	String	True	255		3841f732-aad5-41ab-a9ea-c6e620dcc8bd

registration_status	String	True	255		Pending
registration_status_from_date	Date	True	N/A		2021-02-18 10:07:20.000
supplier_mpid	String	True	4		UGAZ
supplier_role	String	True	255		X
supply_start_date	Date	True	N/A		2021-02-18 10:07:20.000
domestic_premises_indicator	Boolean	True			0
registration_active_date	Date	True	N/A		2021-02-18 10:07:20.000
registration_inactive_date	Date	True	N/A		2021-02-18 10:07:20.000

## 15. Web Service Exceptions

Clients accessing the service over SOAP/XML, exceptions are returned as SOAP faults. For clients accessing the service using JSON, exceptions are returned as JSON objects. Figure 15 below shows the structure of exception objects returned by the ECOES API version 1.0 web service methods.

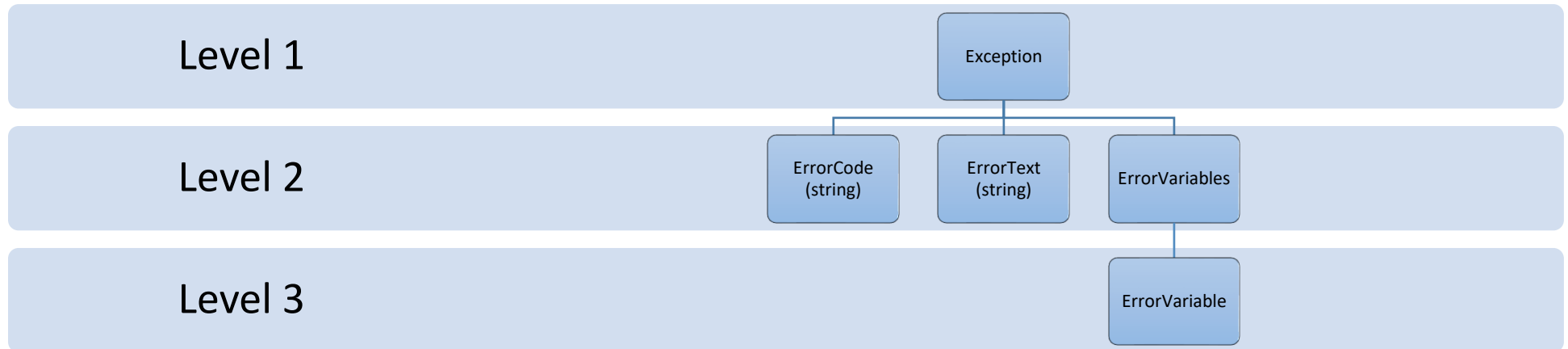


Figure 17

## Appendix A - Error Codes

Code	Description	GetTechnicalDetails ByMpan	SearchUtilityAddress	GetRelatedMPANs	GetRELAddresses	SearchRELAddress	GetCSSMessages
DAT1001	Metering Point for MPAN was not found.	X					
DAT1002	MPAN core was not found.	X	X				
VAL1003	Your current request count of {0} exceeds your maximum request limit of {1}	X	X				
VAL1004	Your message contains {0} requests which exceeds the maximum parameter input of {1} for message {2}	X	X				
VAL1005	You are not authorised to access method {0}	X	X		X	X	X
DAT1003	Your request contains {0} results which exceeds the maximum result limit of {1}.	X					
VAL1007	Your current usage ({0} requests) of method {1} has exceeded the method's maximum usage limit of {2}	X	X				
VAL2020	Insufficient search criteria; at least two search parameters must be supplied when a full postcode is not specified.		X				
VAL2025	A minimum of three characters are required for the "PostCode" search parameter.		X				
VAL2400	A value must be supplied for the "utilityType" parameter.	X					
VAL2410	A value must be supplied for the "utilityKey" parameter.	X					
VAL2460	A value must be supplied for the "MeterSerialNumber" parameter.		X				
DAT2010	No address found for the specified criteria.		X				
DAT2060	No details found for the specified utility type and key.	X					
DAT2080	No details found for the specified utility type and meter serial number.		X				



DAT2430	Too many address records found.		X				
VAL006	Can't search using both Address and Meter Serial Number. Must search using one or the other.		X				
VAL008	You are not permitted to search via Meter Serial Number.		X				
DAT2460	No related MPANs found.			X			
DAT2470	No REL found for specified criteria				X	X	X
DAT2480	Too many REL found for specified criteria.					X	
DAT2490	The RELPermission parameter must be set to "true".				X	X	
DAT2600	Maximum query results exceeded				X	X	X