EES API Technical Specification

Notes

- This document sets out the proposed service that will be introduced as part of the Switching Programme.
- A separate document (version 2.n.n) sets out the current operational service.
- The terms Electricity Enquiry Service (EES) and ECOES have the same meaning in this document.

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References

No	Title

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1 Introduction

This document outlines the web service methods and data items that are exposed by the ECOES API web service.

This service incorporates the following:

- The service provides access to the electricity industry data from ECOES.
- The use of Key Value Pairs throughout the Request and Response objects allows for methods to easily be updated with new key value pairs, with the need for updating the WSDL.
- The service provides a RESTful interface, with both XML and JSON messages, in addition to the SOAP/XML interface.
- **Developers should not rely on the order of the response data items from the API. Data items are not intended to be provided in a logical order and parties should therefore consider each data item and how it is intended to be used within that party's systems.**

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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 in place

- Access to Methods 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 ECOES2 Company Group associated with them.

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

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

	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
CSS	https://uit.ecoes.co.uk/WebServices/Service/ECOESAPI.svc	WCF
	https://uit.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/JSON/	Restful JSON
	https://uit.ecoes.co.uk/WebServices/Service/ECOESAPI.svc/RESTful/XML/	Restful XML
Trial[1]	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc	WCF
	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/JSON/	Restful JSON
	https://www.ecoes.co.uk/WebServices/Trial/ECOESAPI.svc/RESTful/XML/	Restful XML

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

[1] Only applicable to Price Comparison Websites

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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 REC Data Specification 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 Energy Market Architecture Repository (EMAR).

3.1 Domain List

Domain	Value	Meaning
DCC Service Flag	A	Active
	N	Non-Active
	I	Installed Not Commissioned
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 REC Data Specification	
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 REC Data Specification	
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.

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4 Summary of Available Web Service Methods

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

4.1 Web Service Methods

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.
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.
SearchAddress	Retrieves the MPL and REL address for a given search criteria.

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5 Service Limitations

The ECOES API service is provided to clients 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.

5.1 Request Limitations

The ECOES API web service imposes limitations 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.

5.2 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.

5.3 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, the web service will return error code “DAT1003” that indicates this; the web service will not return any of the requested data.

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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 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 C&C Group as the EES Service Provider 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
- 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 C&C Group as the EES Service Provider.

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7 SearchUtilityAddress

7.1 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.

7.2 Method Inputs

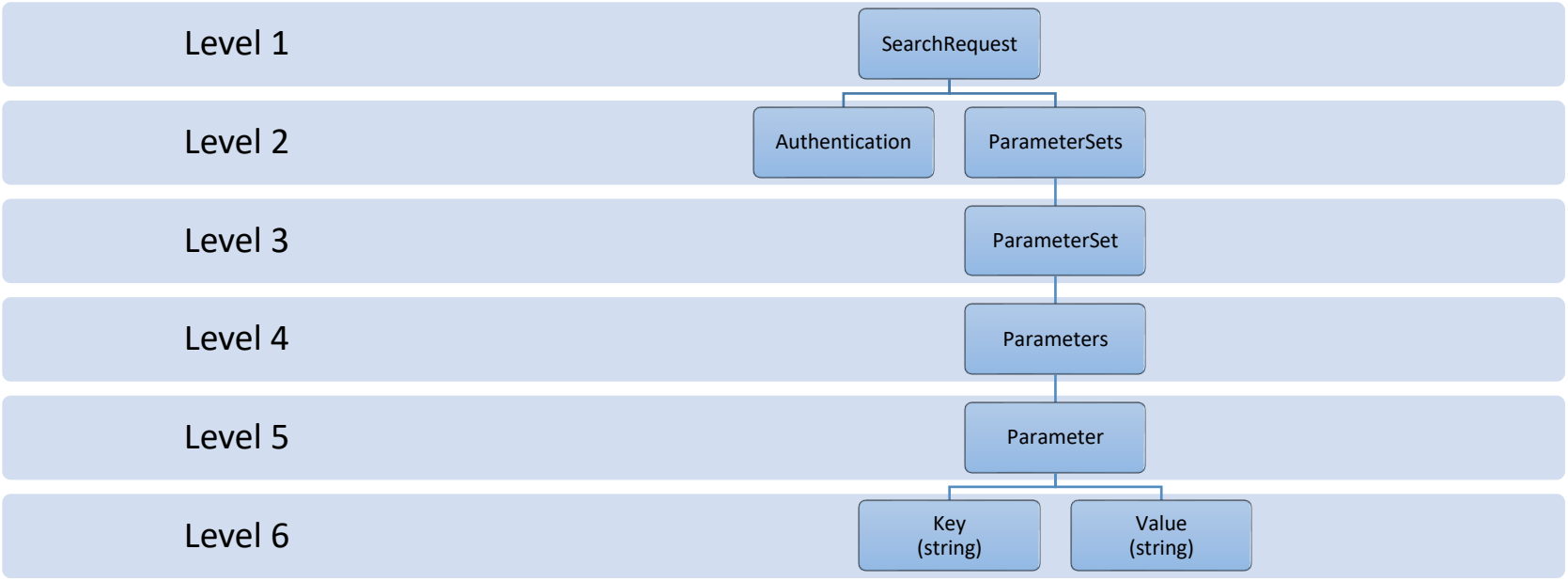


Figure 2

Level	Field	Description
1	SearchRequest	Mandatory. Encapsulates a request sent to the “SearchUtilityAddress” web service method.

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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.

7.3 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.

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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”.

7.4 Method Outputs

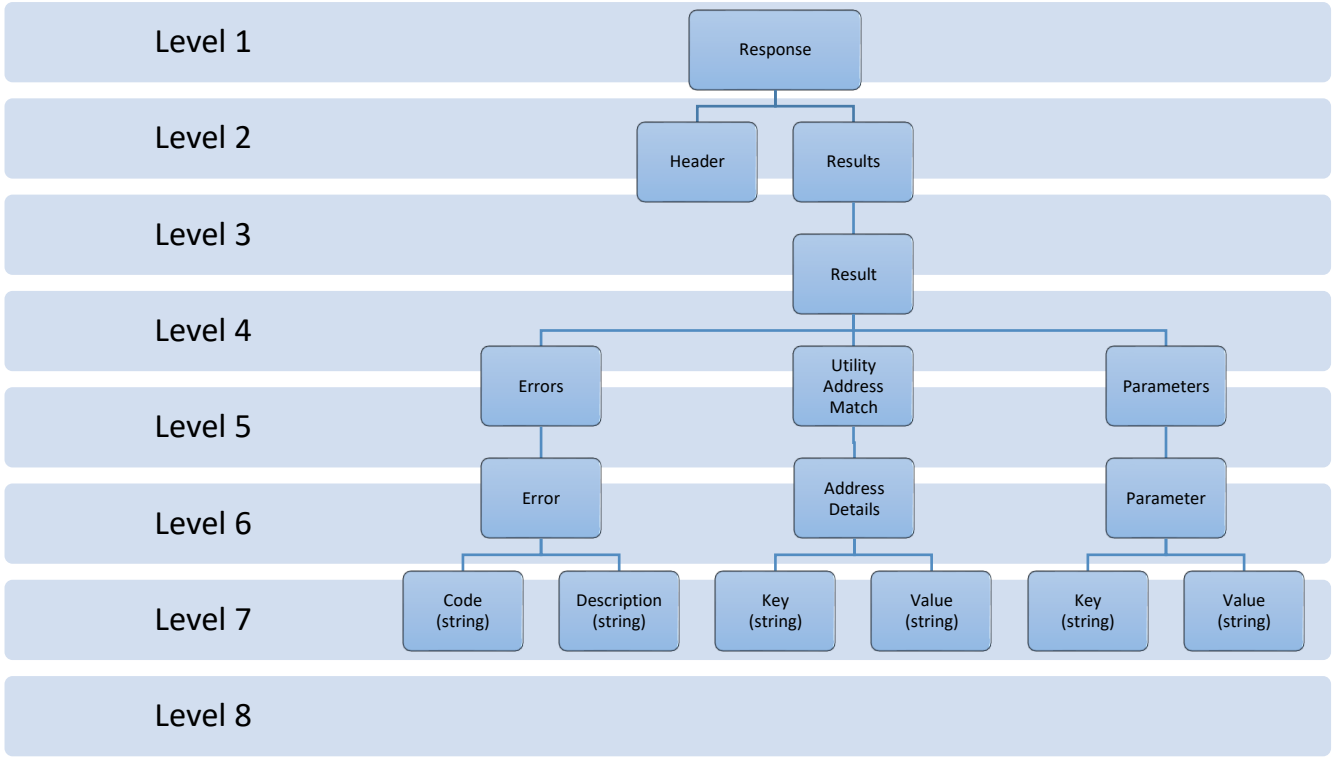


Figure 3

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Level	Field	Description
1	Response	Encapsulates the response returned by the “SearchUtilityAddress” 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 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.
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 7.5 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 8.5
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.

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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.

7.5 Returned Address Details

*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
distributor_mpid	Distributor MPID
trading_status	MPAN trading status
gsp_group_id	Grid Supply Point Group Id

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8 GetTechnicalDetailsByMpan

8.1 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.

8.2 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.

8.3 Supported Parameters

Parameter Name	Description
MPAN	Mandatory.

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8.4 Method Outputs

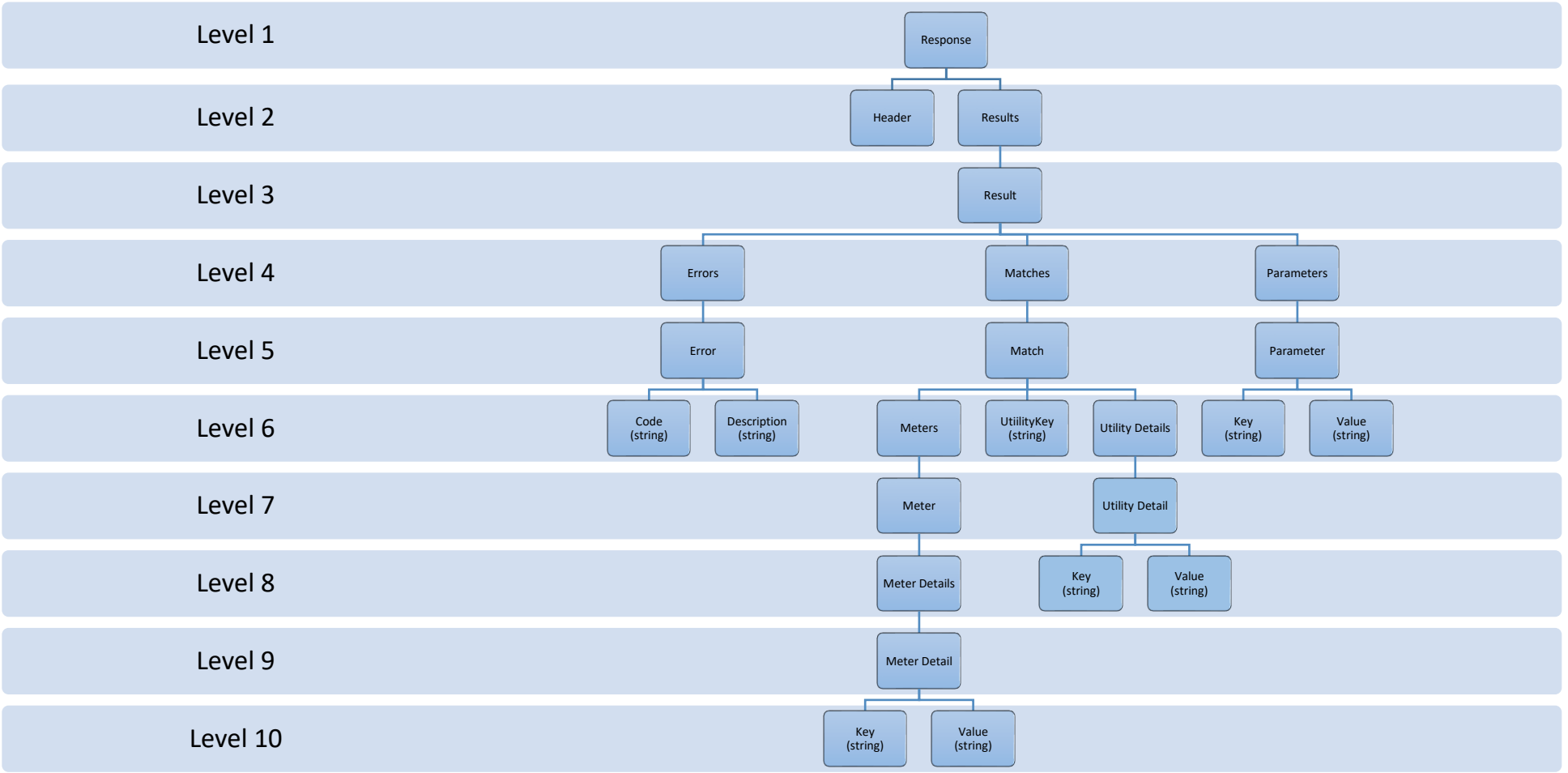


Figure 4

Level	Field	Description
1	Response	Encapsulates the response returned by the “GetTechnicalDetailsByMpan” web service method.

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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 8.6 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.

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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.

8.5 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

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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
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

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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
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 as supplied via CSS messages

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relationship_status_indicator	Relationship Status Indicator
rmp_state	RMP State
rmp_state_efd	RMP State effective from date
css_supplier_mpid	Current supplier as supplied via CSS messages
css_supply_start_date	Current supply start date as supplier via CSS messages

8.6 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
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

9.1 Method Purpose

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

9.2 Method Inputs

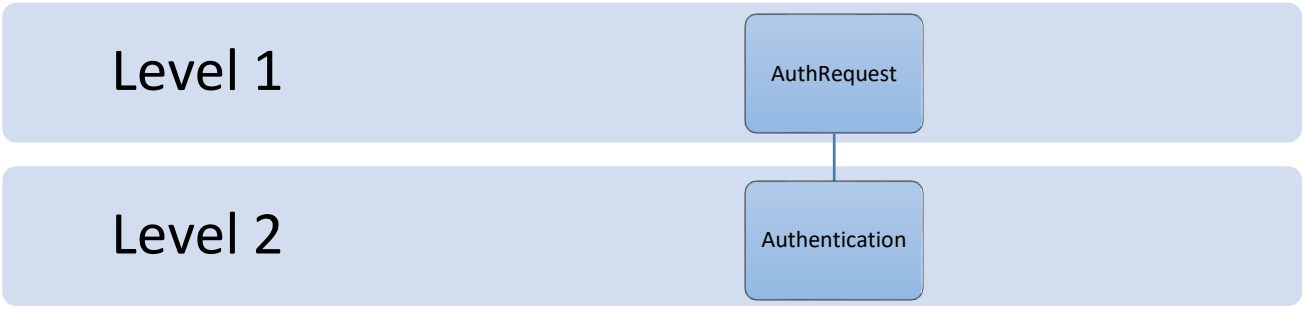


Figure 5

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 section ‘ Web Service Security’ for more information.

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9.3 Method Outputs

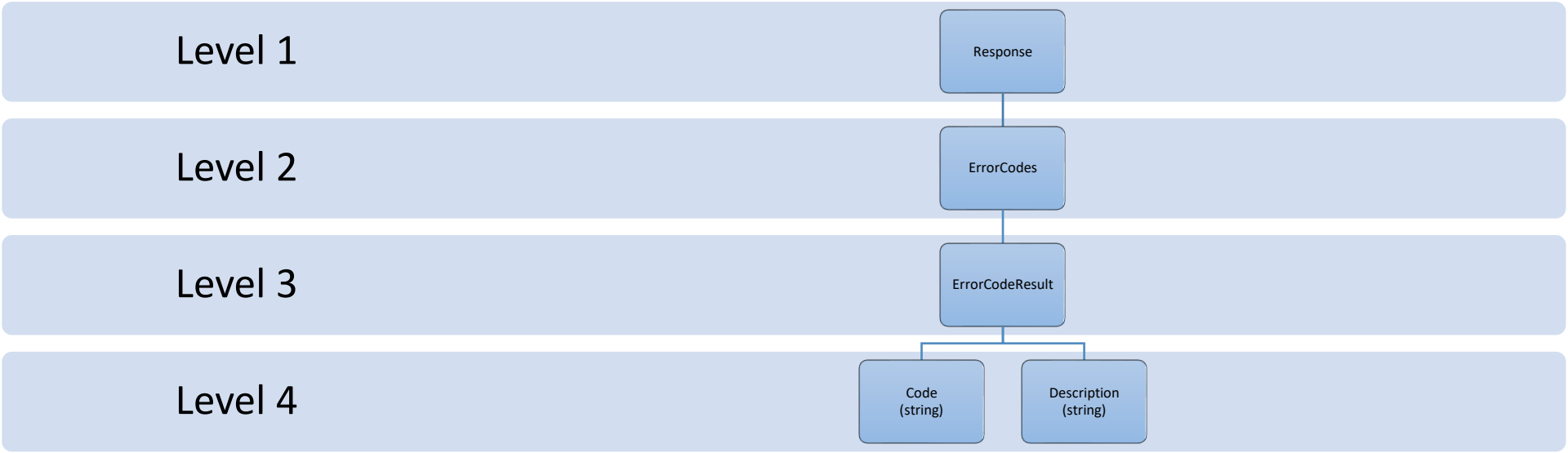


Figure 6

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.

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10 GetSubscriberMethodLimits

10.1 Method Purpose

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

10.2 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 section ‘ Web Service Security’ for more information.

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10.3 Method Outputs

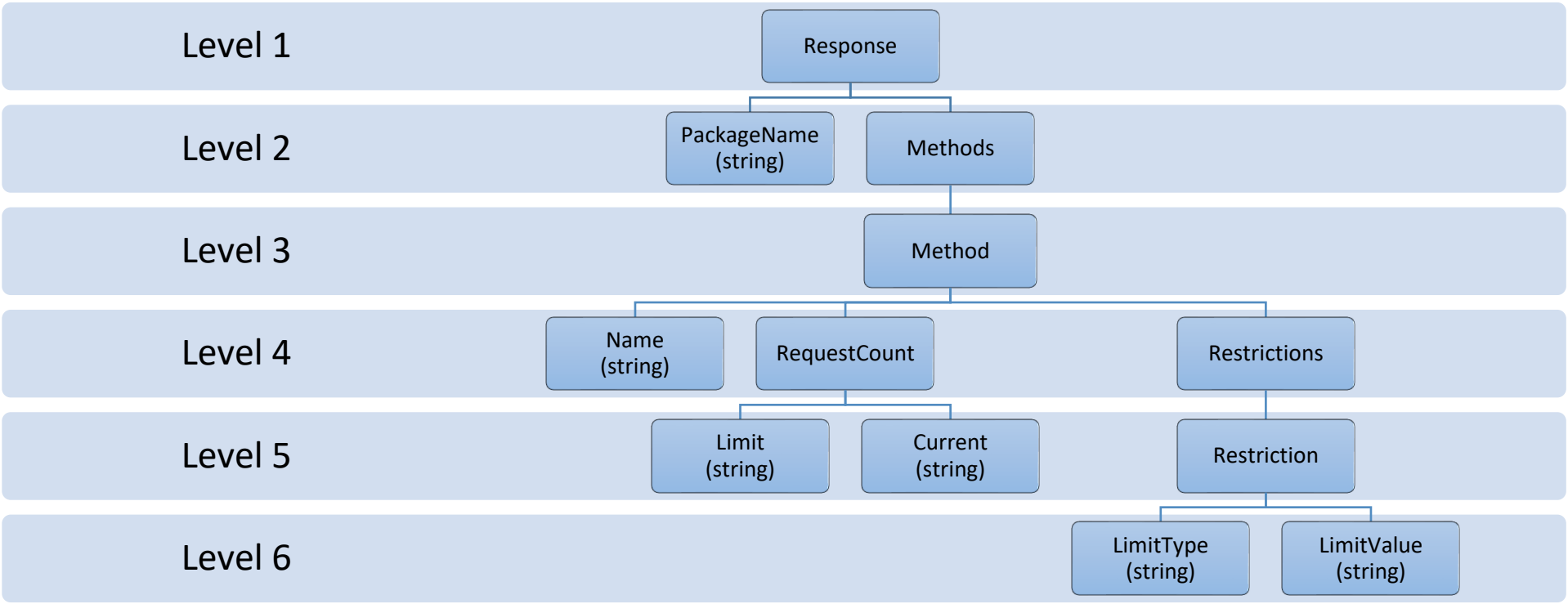


Figure 8

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.

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<table>
<tr><td>4</td><td>RequestCount</td><td>Encapsulates the limit and number of requests made for a given web service method.</td></tr>
<tr><td>5</td><td>Limit</td><td>Holds the request limit for a given web service method, for the calling subscriber.</td></tr>
<tr><td>5</td><td>Current</td><td>Holds the current number of requests made for a given web service method, for the calling subscriber.</td></tr>
<tr><td>4</td><td>Restrictions</td><td>A collection of “Restriction” objects; one for each restriction defined for a given web service method, for the calling subscriber.</td></tr>
<tr><td>5</td><td>Restriction</td><td>Encapsulates a restriction defined for a given web service method, for the calling subscriber.</td></tr>
<tr><td>6</td><td>LimitType</td><td>Holds the type name of the restriction. The type name can be one of the following values.
<table>
<tr><td>Limit Type</td><td>Description</td></tr>
<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>
</table></td></tr>
<tr><td>6</td><td>LimitValue</td><td>Holds the defined restriction value.</td></tr>
</table>

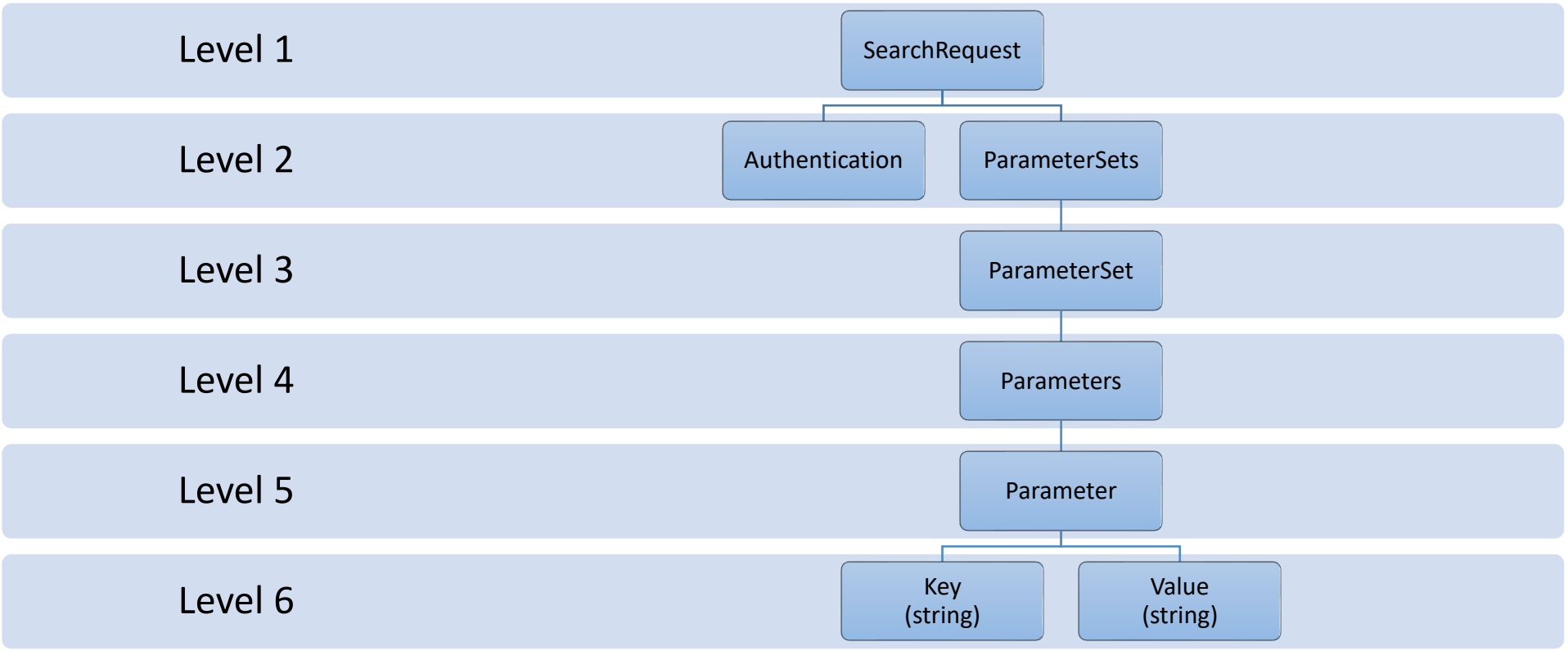
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11 GetRelatedMPANs

11.1 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.

11.2 Method Inputs



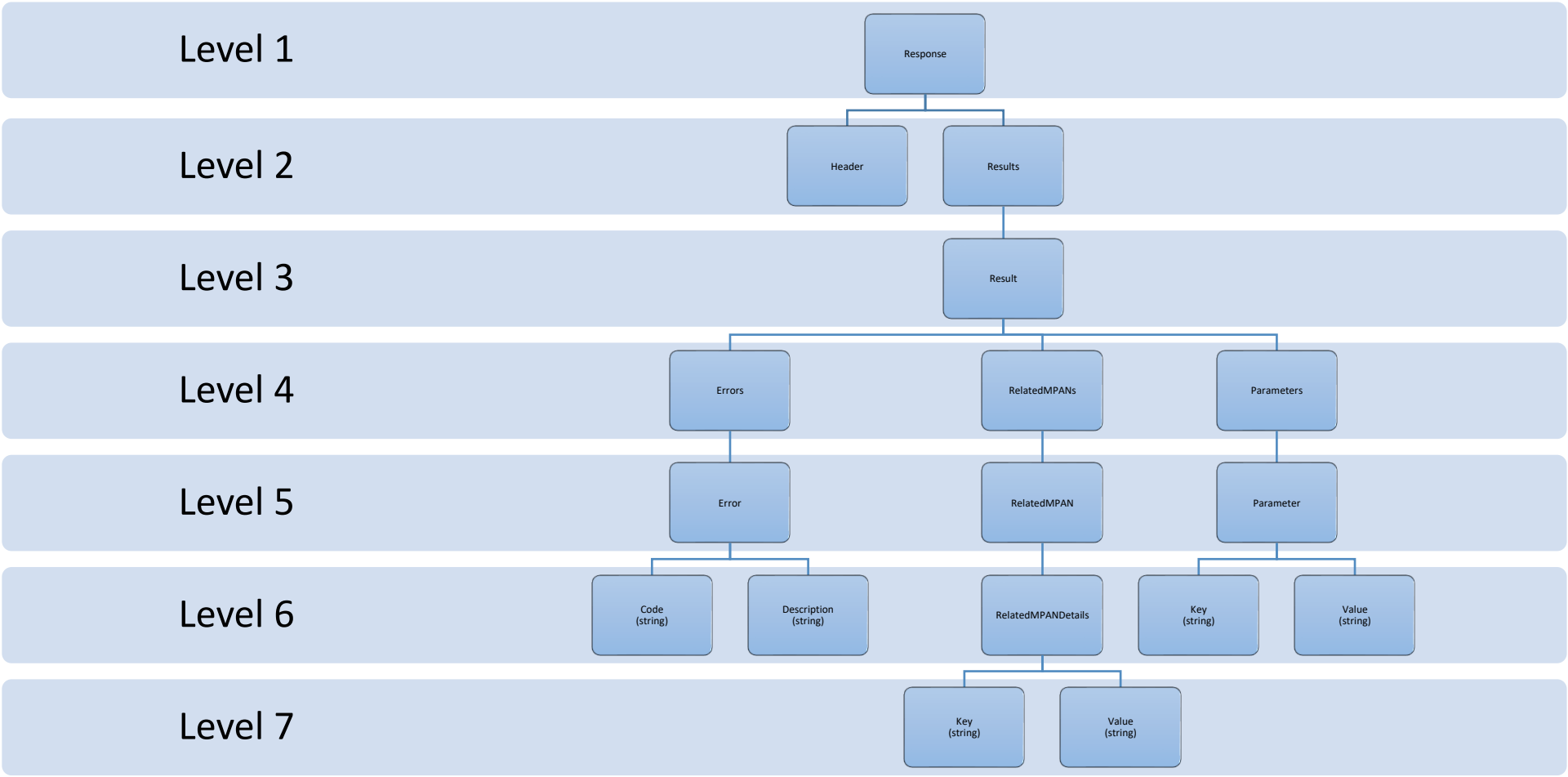
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11.3 Supported Parameters

Parameter Name	Description
MPAN	Mandatory.

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11.4 Method Outputs



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:

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		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	RelatedMPANs	Encapsulates each of the related MPAN records found.
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.

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11.5 Response Data Items

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

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12 GetRELAddresses

12.1 Method Purpose

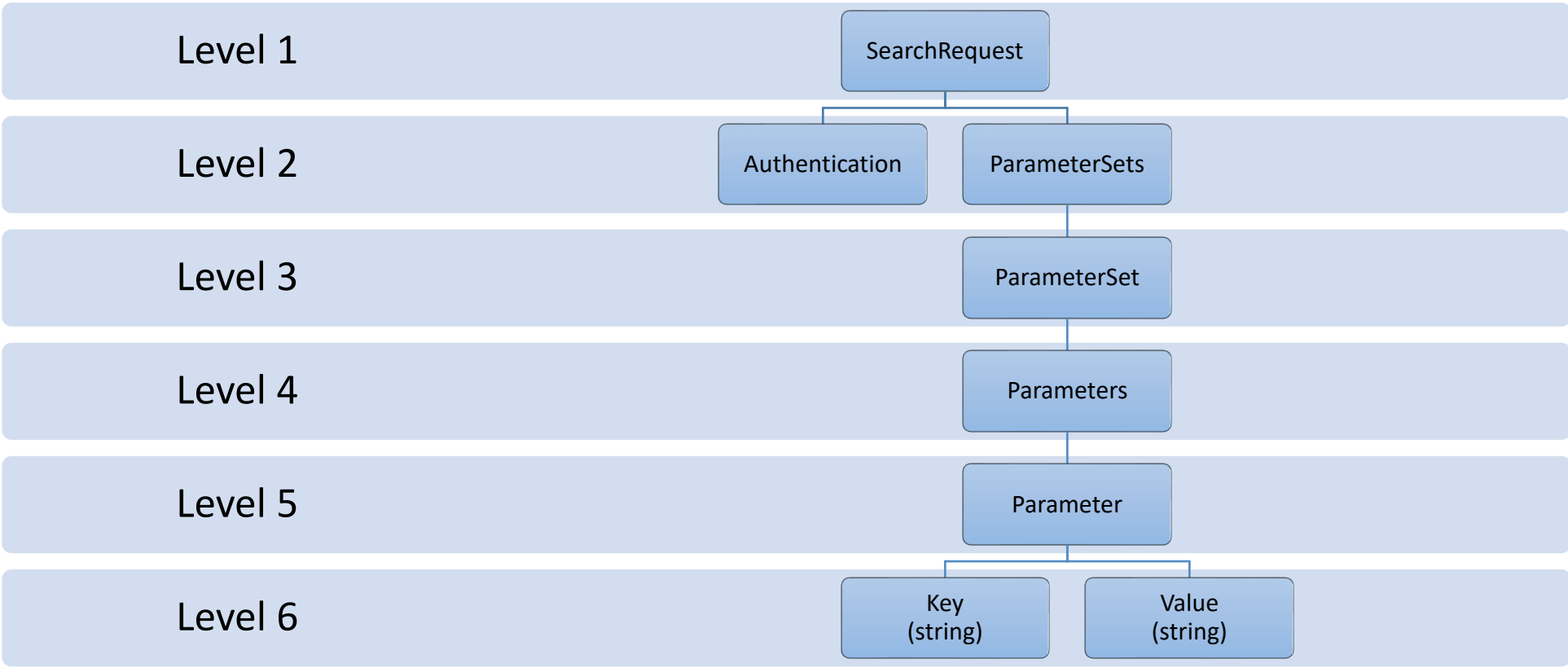
The “GetRELAddresses” method allows the caller to retrieve the current Retail Energy Location (REL) address(es) for a given MPAN (e.g. English spelling, Welsh spelling).

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

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12.2 Method Inputs



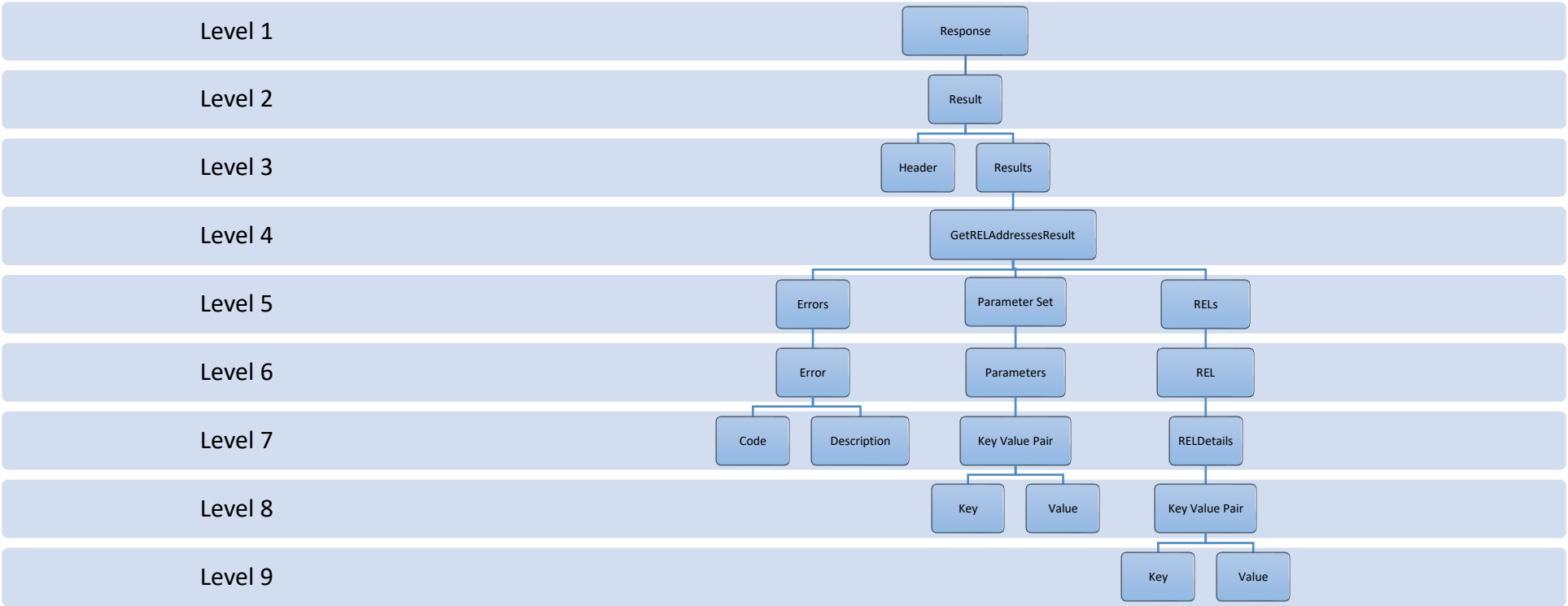
12.3 Supported Parameters

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.

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	If this field does not hold a value of “true”, then a DAT249o error will be returned (The RELPermission parameter must be set to "true"). The default value for this parameter is “false”.
MPAN	Mandatory.

12.4 Method Outputs



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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	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.

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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.

12.5 Response Data Items

IMPORTANT: API developers should note that the logical display order for the REL Address Data Elements is: Secondary Name, Primary Name, Street 2, Street 1, Locality 2, Locality 1, Town.

The API is not provided in the logical display order. Developers should consider each data item based its description rather than its Data Item name.

Data Item	Description	Data Item Type	Nullable	Max Length	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	This is the Secondary Addressable Object description, e.g. the “Flat 2” in the address “Flat 2, London House, Exeter”. This is only relevant for a child property. “London House” in this case will the Primary Name of the parent property	String	True	255	Flat 2

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primary_name	This is the Primary Addressable Object description. This is normally the name and or number of the property	String	True	255	London House
street_2	LPI – Blank DPA - dependant thoroughfare	String	True	255	Witton Grove East
street_1	LPI - derived from Street DPA - the Thoroughfare	String	True	255	Witton Grove
locality_2	LPI - Blank DPA – double dependant locality	String	True	255	Durham East
locality_1	LPI – derived from Street DPA – dependant locality	String	True	255	Durham
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
address_type[2]		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

[2] Address Type = DPA (Delivery Point Address) – Post Office delivery address
Address Type = LPI (Local Property Identifier) – Addresses sourced from Local Authority data

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13 SearchRELAddress

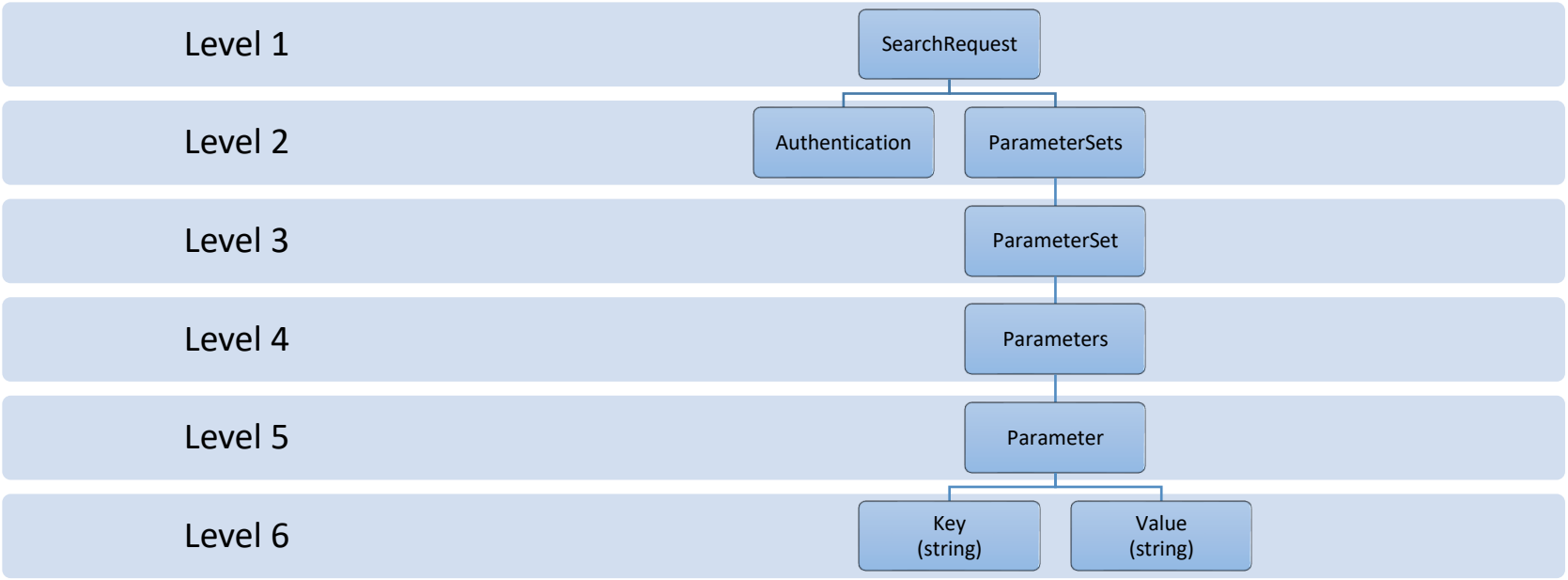
13.1 Method Purpose

The “SearchRELAddress” method allows the caller to retrieve the current REL data for the given search criteria.

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.

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

13.2 Method Inputs



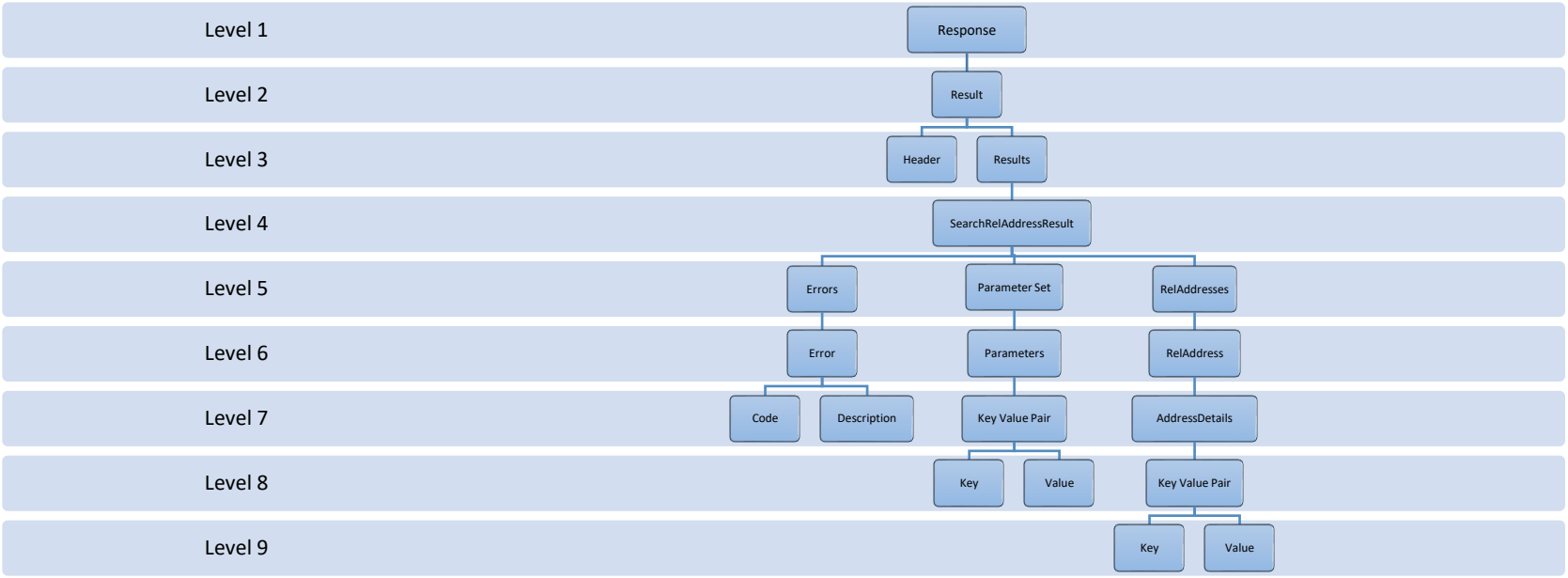
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13.3 Supported Parameters

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: **The RELPermission parameter must be set to "true".** The default value for this parameter is "false".
SearchTerm	Optional. A string to match the REL address data with.
Postcode	Mandatory. Full or partial postcode.

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13.4 Method Outputs



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.

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		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.

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13.5 Response Data Items

IMPORTANT: API developers should note that the logical display order for the REL Address Data Elements is: Secondary Name, Primary Name, Street 2, Street 1, Locality 2, Locality 1, Town.

The API is not provided in the logical display order. Developers should consider each data item based its description rather than its Data Item name.

Data Item	Description	Data Item Type	Nullable	Max Length	Example Values
uprn		Numeric	False	N/A	4
mpan		Numeric	False	13	1591017864341
rel_address_source		String	False	255	MPL
secondary_name	This is the Secondary Addressable Object description, e.g. the "Flat 2" in the address "Flat 2, London House, Exeter". This is only relevant for a child property. "London House" in this case will the Primary Name of the parent property	String	True	255	Flat 2
primary_name	This is the Primary Addressable Object description. This is normally the name and or number of the property	String	True	255	London House
street_2	LPI – Blank DPA - dependant thoroughfare	String	True	255	Witton Grove East
street_1	LPI - derived from Street DPA - the Thoroughfare	String	True	255	Witton Grove
locality_2	LPI - Blank DPA – double dependant locality	String	True	255	Durham East
locality_1	LPI – derived from Street DPA – dependant locality	String	True	255	Durham
town		String	True	255	Pity Me
postcode		String	True	8	DH1 6AD

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logical_status		Numeric	True	N/A	1
language		String	True	3	ENG
organisation		String	True	255	ECONOGROUP
address_type[3]		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

[3] Address Type = DPA (Delivery Point Address) – Post Office delivery address
Address Type = LPI (Local Property Identifier) – Addresses sourced from Local Authority data

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14 GetCSSMessages

14.1 Method Purpose

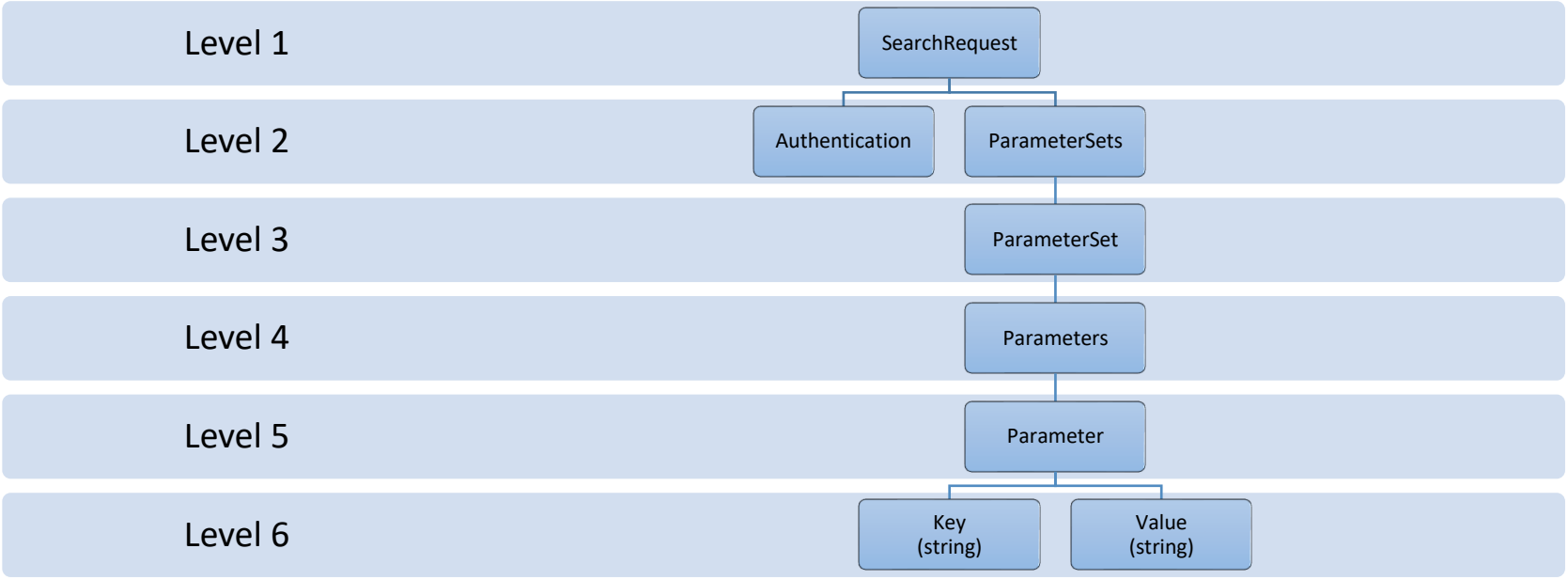
The “GetCSSMessages” method allows the caller to retrieve the CSS messages for a given MPAN received within the last 90 days.

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.

14.2 Method Inputs



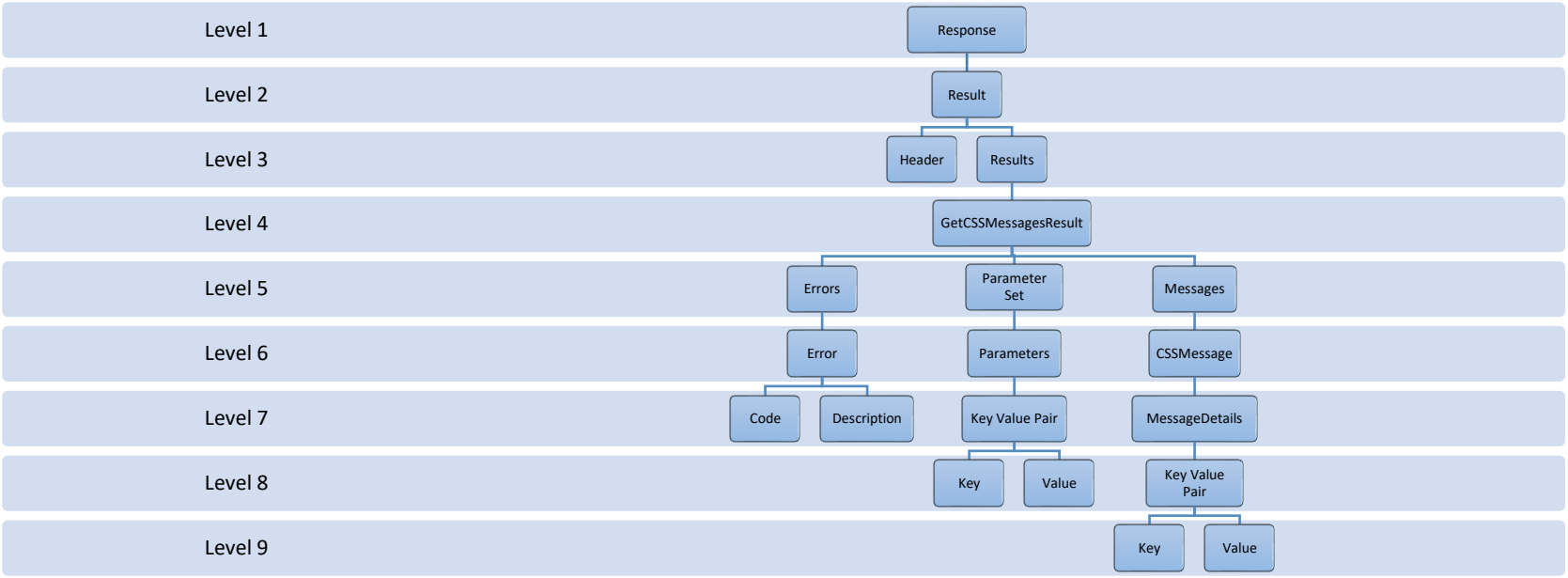
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14.3 Supported Parameters

Parameter Name	Description
MPAN	Mandatory.
EventType	Optional. **Accepted values:** RegistrationSecuredInactiveSynchronisation RegistrationEventSynchronisation RegistrationPendingSynchronisation RegistrationCancelledSynchronisation RegistrationSecuredActiveSynchronisation RetailEnergyLocationSynchronisation
EventDateFrom	Optional.
EventDateTo	Optional.

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14.4 Method Outputs



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.

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		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.

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14.5 Response Data Items

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

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15 SearchAddress

15.1 Method Purpose

The “SearchAddress” method allows the caller to retrieve both the MPL address and REL address data matching a given search criteria.

If the “IsForSwitching” parameter is provided with a value of “true”, the search is performed against all current MPL and REL data. Current REL data is that which was received on the latest RetailEnergyLocationSynchronisation message, as determined by Event Date. Historical MPL and REL data will not be searched against.

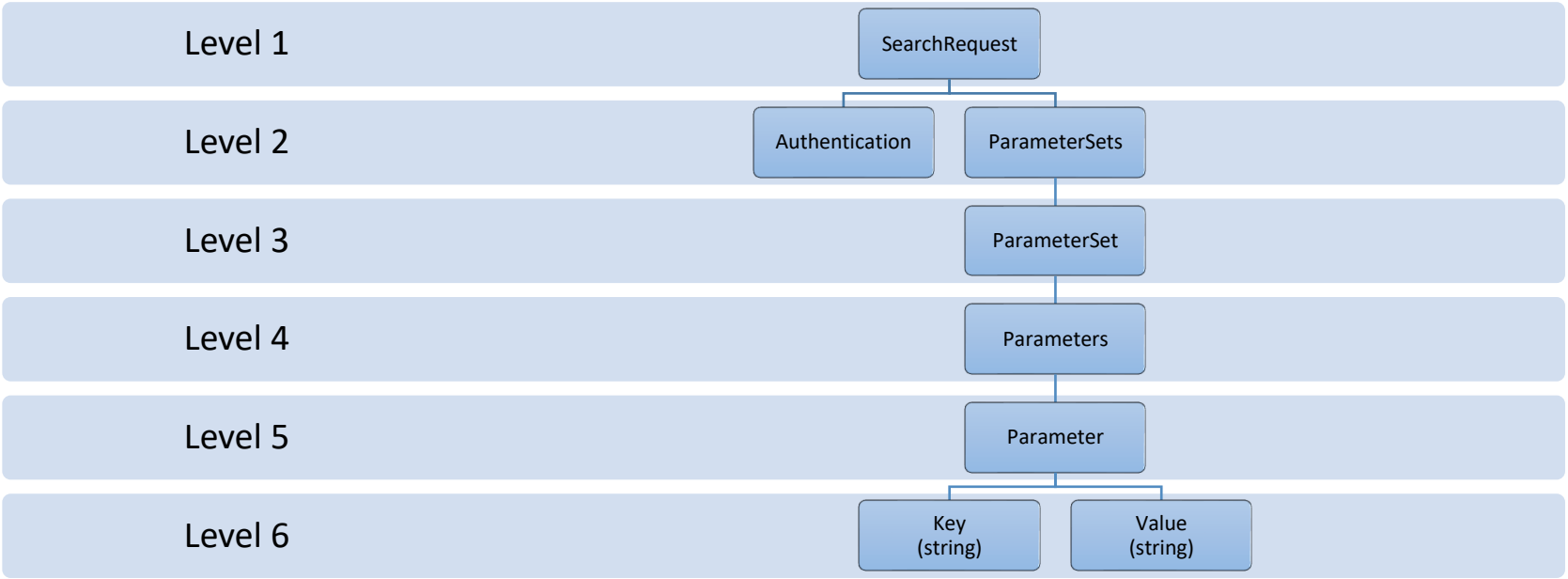
If a REL address match is found, the UPRN associated with the REL address is used to return all REL address data for that UPRN.

If the “IsForSwitching” parameter is provided with a value of “false”, or not provided at all, the search is performed against the MPL data only.

The method returns MPL and/or REL address data only, no other MPAN or meter data is returned.

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15.2 Method Inputs

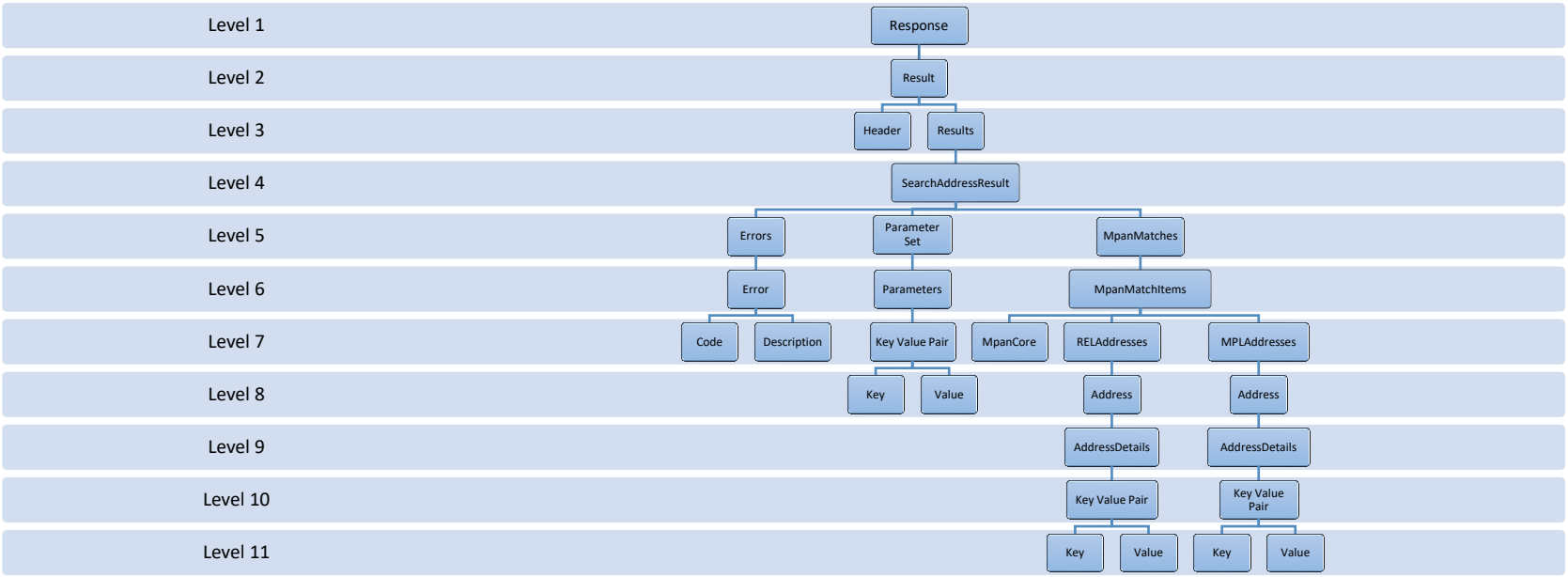


15.3 Supported Parameters

Parameter Name	Description
IsForSwitching	Optional. Holds a Boolean value that indicates whether the process calling the web service is doing so for the purposes of switching. If this field does not hold a value of “true” or “1” no result will be returned. Instead, an error message will be returned. The default value for this parameter is “false”. If not provided, this field will default to “false”.
SearchTerm	Optional. A string to match the MPL and/or REL address data with.
Postcode	Mandatory. Full or partial postcode.

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15.4 Method Outputs



Level	Field	Description
1	Response	Encapsulates the response returned by the “SearchAddress” web service method.
2	Result	Encapsulates the result returned by the “SearchAddress” 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.

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		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	SearchAddressResult	Encapsulates the Address 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	MpanMatches	Encapsulates the matched MPAN object.
6	MpanMatchItems	Encapsulates the matched MPAN object items.
7	MpanCore	The MPAN Core
7	RELAddress	Encapsulates the REL address data.
7	MPLAddress	Encapsulates the MPL address data.
8	Address	Encapsulates the Address
8	AddressDetails	Holds a collection of key value pair data items.
9	Key Value Pair	Holds a data item key and value.

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10	Key	Holds the name of a data item.
10	Value	Holds the value of a data item.

16 Web Service Exceptions

For 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 9 below shows the structure of exception objects returned by the ECOES API version 1.0 web service methods.

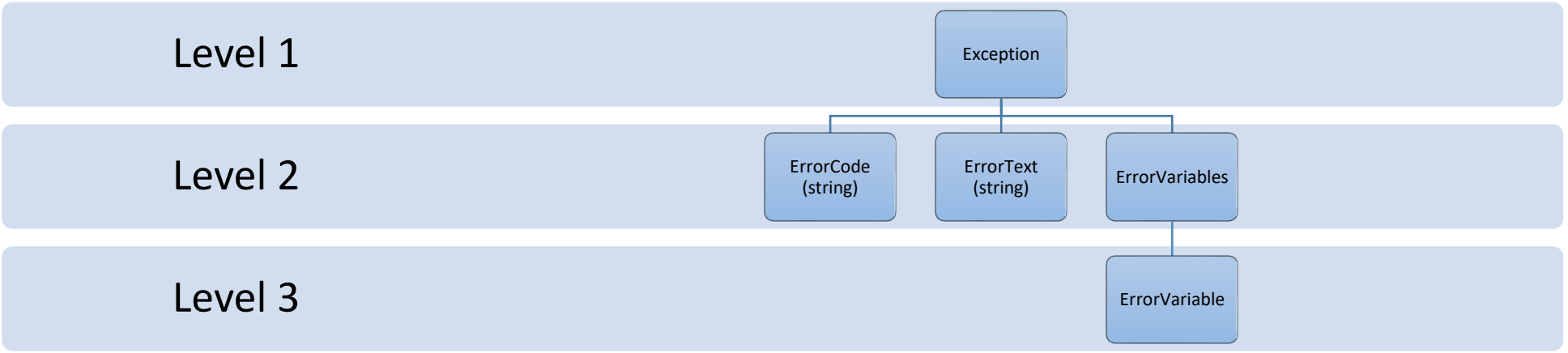


Figure 9

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Appendix A - Error Codes

Code	Description	GetTechnicalDetailsByMpan	SearchUtilityAddress	GetRelatedMPANs	GetRELAddresses	SearchRELAddress	GetCSSMessages	SearchAddress
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					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	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					

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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	
DAT2490	The RELPermission parameter must be set to "true".				X	X		
DAT2600	Maximum query results exceeded				X	X	X	X

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