



Gemini API Specification

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1. Gemini API Specification for Business Associates

1.1 Introduction

An API based data transfer mechanism is provided with Gemini. Business Associates (BAs) of Xserve will use these APIs to access specific features of Gemini.

This document provides specifications of APIs that are currently available in Gemini and Gemini Exit along with a brief description of each API, the input and output parameters required. API specific error codes are also listed.

To access APIs provided by NGT, BAs must develop their own API client programs (henceforth shortened to API clients). This document also provides guidelines for developing API clients.

1.1.1 Scope

This document provides API specifications for Gemini APIs and Gemini Exit APIs. The following API specifications are described in this document:

In Gemini APIs there are following sub sections:

- Energy Balancing
 - Shipper Preliminary Balance
 - System Nomination Balance
 - View INS Nominations
 - View Re-nomination Details
 - View Shipper Trade Details
 - View Storage Output Claims
 - Meter to Zone Relationship
 - Price Information History
 - Register Physical Locational Trades
 - Register Title Swap
 - Shipper EOD Nominations Hour Bar

Shipper Total Energy Forecast

- Gas Trades Breakdown
 - View OCM Re-nomination Details
 - Maintain Physical Re-nominations Update
 - View Re-nominations
 - Update INS Nominations
 - Update Re-nominations
 - View WCF SF Values
 - Add or Update Nominations
 - Update Multilocal Trade
 - Daily Cash Out Tolerance Breakdown
 - System Status Information
 - System Status History
 - View Shipper UIG Values
- Entry Capacity

- All Active Bids
- Bid Information Normal Pricing
- Capacity Trade Details
- Capacity Trade Registration
- Revised Entitlements
- IP Locations
 - EU Code Changes Add Update IP Nomination API
 - EU Code Changes View IP Nomination API
 - EU Code Changes IP Entry Entitlement API

In Gemini Exit APIs there are following sub sections:

- Exit Capacity
 - Exit Capacity Interfaces
 - Auction Request Information
 - Entitlement Report
 - Max Min Price Information
 - Sold Unsold Daily Auction
- IP Locations
 - EU Code Changes IP Exit Entitlement API

The intended audiences for this document are BAs of NGT wishing to use the services provided by these APIs.

1.1.2 Document structure

Section 1: gives a brief description of the API architecture and provides guidelines for developing API clients.

Section 2: gives a quick reference for API URLs and location of schemas.

Section 3: lists the XML element names and abbreviations.

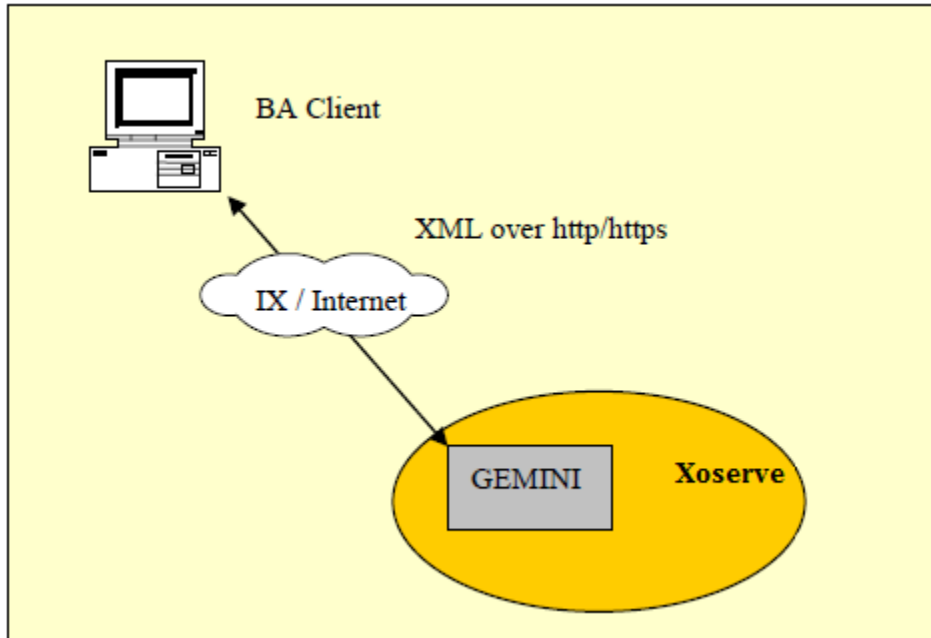
Section 4: details message specifications for the APIs.

2. API Overview

BAs must develop API clients to use the APIs provided by Gemini and Gemini Exit. Guidelines for developing API clients are provided in section 1 API Client Guidelines of this document.

API clients will specify a URL to access an API (these URLs will be different from those of screens). API clients must issue an https request that contains user credentials and the API input parameters in XML format. After processing this request, Gemini will return an https response with the output parameters in the body (the output will also be in XML format).

Each API therefore is a request/response pair.



The mode of communication between BAs and Gemini for API data transfer will be either IX or, if offered as a Gemini service, Internet.

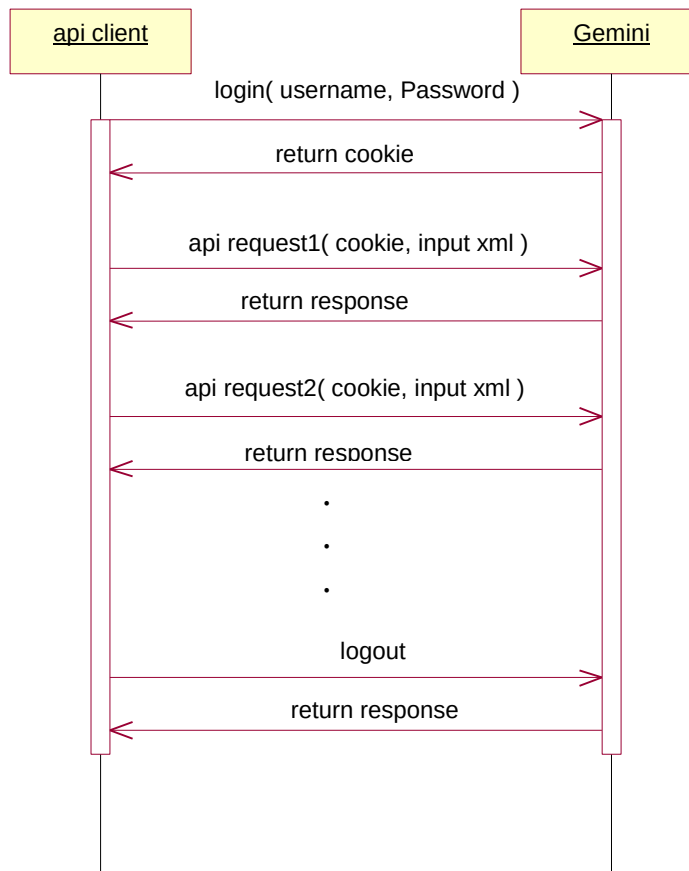
To develop API clients, any of the SSL toolkits such as OpenSSL, JSSE (provided by Sun Microsystems), etc., that support TLSv1, may be used.

2.1 API Client Guidelines

APIs are accessed using the https protocol for the secure transfer of data. Gemini web servers will have certificates from a valid CA. API clients must validate and retain the Gemini Web server certificates. TLS is used for both access via the IX and the Internet (if access via the Internet is offered as a Gemini service).

API Clients must replicate the standards for handling cookies that are implemented by all web browsers; namely, all cookies provided by Gemini web servers must be returned on subsequent calls to the APIs.

The following diagram illustrates a typical sequence of actions during API invocations:



The following is the sequence of actions during an API invocation

- API clients will be authenticated using login credentials (ID and password). The API client invokes the login URL and provides an ID and associated password. These will be passed through https headers.
- Gemini authenticates the API client and returns a session cookie as a response. A session cookie will be sent to the API client along with each https response. API clients must send the latest received cookies with every subsequent request for an API invocation.
- The API client constructs an XML document containing the input parameters. The XML document must conform to the corresponding schema definition of the API being invoked. All API schemas will be located on an Xoserve server.
- The API client passes the XML document, along with the latest cookies, to the URL specified for the API.
- Gemini receives the request, parses the XML, and services the request. The response is sent in the form of an XML document embedded in an https message.
- The API client examines the https response to check if the request was successful.
- If the request was successful, the API client extracts the XML and interprets the XML document as per the schema definition of the API.
- If the request was not successful, the API client must handle the reported error condition(s).
- One or more calls can be made in time sequence. The response (whether successful or an error) to an API call must be received before submitting another API call within the same session.
- If the timeout period is exceeded between successive API calls, then the session is timed out and the login steps must be repeated to establish a new session before recommencing API calls.
- The API client invokes the logout URL to terminate the session when all desired requests/responses have been processed.

- Cookies must remain “within session”, i.e., cookies sent by a Gemini in one session must not be returned to Gemini in another session.

The above sequence of steps is described in detail within the sample code. The sample code is for guidance only. Its purpose is to give examples of the use of Gemini APIs. It does not constitute code licensed or supported by Xoserve. For the purpose of this illustration the Java language has been used. Please note that this does not dictate the use of the Java language for writing API clients.

NB: Xoserve will not deliver or support API clients.

1.3.1 API Login

API clients invoke the login URL for authentication and provide login credentials. The ID and password are passed through https headers.

1.3.1.1 https Request Headers

	Request Header Key	Value
1	.Cookie	SMCHALLENGE=YES
2	.Authorization	Http basic authentication is adopted for authenticating the BA. The ID and the password must be concatenated with a delimiter (:). The combined string must be encoded using Base64 encoding. The Base64 encoded value must be passed with this header.

Sample Code

```
/* Connect to Gemini */

url = new URL("https://<server>:<port>/<LoginURL>");
urlConnection=(HttpURLConnection)url.openConnection(); urlConnection.setRequestMethod("POST");

/* Request Headers with ID and password sent to Gemini */

urlConnection.setRequestProperty("Cookie","SMCHALLENGE=YE\S"); String encodedLogin =
base64Encode("userID", "password"); urlConnection.setRequestProperty("Authorization",
encodedLogin);
```

1.3.1.2 https Response Headers

Case 1: Successful Authentication

On successful authentication, the following response will be sent to the API client

	Response Header Key	Value
1	.Set-Cookie	GEMINIAPIAUTHENTICATION=2001
2	.Set-Cookie	GEMINIAPIAUTHORIZATION=2002
3	.Set-Cookie	SMSESSION Cookie containing encrypted session ID. API clients must send the latest received cookies with every subsequent API invocation request.

Case 2: Authentication/Authorization Failed

In the case of authentication/authorization failure, the following response will be returned to the API client

	Response Header Key	Variable value
1	.Set-Cookie	GEMINIAPIAUTHENTICATION=4001
2	.Set-Cookie	GEMINIAPIAUTHORIZATION=4002
3	.LOCATION	SMAUTHREASON=<value> The following are possible values :User must change password :Invalid Session :Revoked Session :Expired Session :Unknown User :User Disabled :Invalid Session ID :Password Expiry Warning :Password Expired :Immediate Password Change Required 24 :Max Failed Login Attempts Exceeded <i>In the event of any other value returned please contact NGT</i>

In order to obtain supplementary information about the cause of failure, the API client must check for the LOCATION Response Header Key. The 'SMAUTHREASON' name/value pair contains the supplementary information.

Sample Code

```

/* Response Header from Gemini */

boolean failureFlag = false; int count = 0;
while(urlConnection.getHeaderFieldKey(count++) != null)
{
String sKey = urlConnection.getHeaderFieldKey(count); String sValue =
urlConnection.getHeaderField(count); if(sKey.equals("Set-Cookie"))
{
if(sValue.indexOf("GEMINIAPIAUTHENTICATION=2001") != -1)
{
System.out.println("Successful authentication");
}
}
}

```

```

}
if(sValue.indexOf("GEMINIAPIAUTHORIZATION=2002")!=-1)
{
System.out.println("Successful authorisation");
}
if(sValue.indexOf("GEMINIAPIAUTHENTICATION=4001")!=-1)
{
System.out.println("Authentication failed"); failureFlag = true;
}
if(sValue.indexOf("GEMINIAPIAUTHORIZATION=4002")!=-1)
{
System.out.println("Authorisation failed"); failureFlag = true;
}
/*In case of successful authentication/authorisation store the session cookie */
if(!failureFlag && sValue.indexOf("SMSESSION")!=-1)
{
setLatestSessionCookie(sValue);
}
}
/* LOCATION header key needs to be checked only in case of authentication/authorisation failure
to obtain supplementary information */

if(failureFlag && sKey.equalsIgnoreCase("LOCATION"))
{
if(sValue.indexOf("SMAUTHREASON=1")!=-1)
{
System.out.println("User must change password");
}
}
/* Similar checks must be done for other SMAUTHREASON values */
}

```

1.3.1.3 https Response Body

The https response body returned by the login API will be null.

1.3.2 API Invocation

1.3.2.1 https Request Headers

The cookies that were last received by the API client must be passed through https headers. API clients must use the POST method to submit their requests.

	Request Header Key	Value
1	Content-Type	text/xml
2	Cookie	All the latest received cookies provided by Gemini Web servers must be returned with every subsequent API invocation request.

Sample Code

```

/* Connect to Gemini */

url = new URL("https://<server>:<port>/<API-URL>");
urlConnection=(HttpsURLConnection)url.openConnection();
urlConnection.setRequestMethod("POST");
urlConnection.setRequestProperty("Content-Type", "text/xml");
int count = 0;
while(urlConnection.getHeaderFieldKey(count++) != null)
{
String sKey = urlConnection.getHeaderFieldKey(count); String sValue =
urlConnection.getHeaderField(count);

if(sKey.equals("Set-Cookie"))
{
urlConnection.setRequestProperty("Cookie", sValue);
}
}

```

1.3.2.2 https Request Body

The API client passes the XML document containing the input parameters as the https request body. For an API request, only one name value pair can be sent.

	Name	Value
1	.INPUT	Valid XML input document, which contains input Parameters sent to the server for processing as part of the request.

Sample Code

```

/* Request body sent to Gemini */

String strXMLParams = "INPUT="+xmlDocument.toString();
outputStream.write(strXMLParams.getBytes());
outputStream.flush();

```

1.3.2.3 https Response Header

	Response Header Key	Value
1	.Set-Cookie	SMSESSION and other values. (All latest received cookies provided by Gemini web servers must be returned with every subsequent API invocation request)

Sample Code

```

/* Response header from Gemini */

int count = 0; while(urlConnection.getHeaderFieldKey(count++) != null)
{
String sKey = urlConnection.getHeaderFieldKey(count); String sValue =
urlConnection.getHeaderField(count);

if(sKey.equals("Set-Cookie"))
{
/*Retrieve All the Cookies send as response.
These cookies must be returned with every subsequent API invocation
request. */
}
}

```

1.3.2.4 https Response Body

A valid XML document will be sent as the response body. This XML document will confirm to the output schema definition of the corresponding API.

1.3.3 API Logout

The API client invokes the logout URL to terminate the session.

1.3.3.1 https Request Headers

	Request Header Key	Value
1	.Cookie	All latest received cookies provided by Gemini web servers must be returned with the invocation of API Logout.

1.3.4 Change Password

Passwords cannot be changed by an API call. The change password link from the browser based Gemini login page can be used for changing API access passwords.

1.3.5 Error Handling

When the processing of a request from an API client fails, XML output containing the error message is sent back to the API client. A schema for the XML error response is shown below.

API clients must handle https response errors (400 and 500 series).

API Clients must verify the https response header ‘content-type’ for the value ‘text/xml’ to check if the response from APIs contains an XML document. For all other cases this header value will be set to something other than ‘text/xml’.

1.3.5.1 Error Response XML specification

Hierarchy	Data Element	Description	Data Type
0	errors	Top level hierarchy for errors	
1	errInfo	Top level hierarchy for error elements. One or many errors can be returned. Attribute “ID” of this element, shows the sequence identifier of the error.	
2	errCode	Error Code	String
2	errDesc	Error Description	String

Schema Definition

Name of file: **geminiaapierror.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="errors">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="errInfo" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="errCode" type="xs:string"/>
              <xs:element name="errDesc" type="xs:string"/>
            </xs:sequence>
            <xs:attribute name="ID" type="xs:int" use="optional"/>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

1.3.5.2 Error Codes and Description

BAs can use the XML schema definitions published by NGT to validate input and output XML documents. Below is a list of possible error codes that can be returned by an API call.

Error code	Error Message
GEM_API_ERROR_0000	System error
GEM_API_ERROR_0001	XML document is not valid
GEM_API_ERROR_0002	No record(s) found
GEM_API_ERROR_0003	The record could not be saved
GEM_API_ERROR_0004	The sub transaction start date cannot be less than the sub transaction end date
GEM_API_ERROR_0005	The transaction start date cannot be less than the transaction end date
GEM_API_ERROR_0006	Period From cannot be less than Period To

2. Gemini APIs

2.1 IP Locations

2.1.1 EU Code Changes Add Update IP Nomination API Spec

2.1.1.1 Overview

This specification contains the interface details (e.g. relevant URLs, request and response XML message formats, specific error messages) for the *Add/Update IP Nomination* API. For more general guidance on API function and usage, refer to the Gemini API Usage Guidelines.

The *Add/Update IP Nomination* API will be used to place Nominations and Re-Nominations at EU NTS Interconnector Points for a Gas Day.

The *Add/Update IP Nomination* API can be accessed by Shippers.

The API request schema and response schema for *Add / Update IP Nomination* API are in line with Nomination Initiation message (NOMINT) and Acknowledgement message (ACKNOW) respectively, as defined under EDIG@S Nomination schemas V5.1.

2.1.1.2 API URLs

All URLs are expressed relative to the root URL for the API service. Shippers are advised to parameterise URLs to minimize the impact of change.

URL to access the API

API clients must invoke the following URL to access this API's functionality:

</gemini/controllers/GemIPNomintControllerAPI/>

The XSD found at this URL can be used to validate the request XML format:

</gemini/api/schema/geminiapinomintrequest.xsd>

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapinomintresponse.xsd>

2.1.1.3 XML Specifications

2.1.1.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	NOMINATION_DOCUMENT		Top-level hierarchy for Nomination Document.			
1	IDENTIFICATION	-	Unique Identification of nomination file	xs:string	35	Yes
1	VERSION	-	Version of the XML file being sent	xs:integer	03	Yes
1	TYPE	-	This field represents the type of request being sent. Possible Values: 01G - Nomination Document	xs:string	03	Yes
1	CREATIONDATETIME	-	This field represents Date and time of the creation of the API request. E.g. YYYY-MM-DDThh:mm:ssZ 2015-10-30T08:15:30Z	xs:dateTime	20	Yes
1	VALIDITYPERIOD	-	This field represents the start and end date and time of the period of validity covered in the file	xs:string	35	Yes
1	CONTRACTREFERENCE	-	This field is not applicable for National Grid NTS. A default value of "NA" must be used	xs:string	35	Yes
1	CONTRACTTYPE	-	This field is not applicable for National Grid NTS. A default value of "NA" must be used	xs:string	3	No
1	ISSUER_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who has issued the API request	xs:string	16	Yes
1	ISSUER_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who has issued the API request. Possible values: ZSH - Shipper	xs:string	03	Yes
1	RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who is receiving the API request	xs:string	16	Yes

1	RECIPIENT_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who is issuing the API request. Possible values: ZSO - Transmission System Operator	xs:string	03	Yes
1	APPLICATIONCONTEXT	-	Used for coded identification for an EIC location code. Possible values: 305 - EIC location code	xs:string	03	No
1	CONNECTIONPOINT	Top-level hierarchy for Connection Point.				
2	IDENTIFICATION	Connection Point	Unique identification (EIC) of a connection point	xs:string	35	Yes
2	MEASUREUNIT.CODE	Unit	This field represents the unit of measure which is applied to all the quantities in the API request. Possible values: KW2 - Kilowatt-hour per day (kWh/d)	xs:string	03	Yes
2	NOMINATIONTYPE	Top-level hierarchy for Nomination Type.				
3	TYPE	Nomination Type	This field represents whether the underlying information refers to a single sided nomination or a double sided nomination Possible values: A01 - Single Sided A02 - Double Sided	xs:string	03	Yes
3	ACCOUNT	Top-level hierarchy for Account				
4	INTERNALACCOUNT	BA	Unique identification of the internal account (Shippers) that is defined by the Transmission System Operator	xs:string	35	Yes
4	INTERNALACCOUNTT SO	-	Unique identification of the System Operator that created the internal account identification	xs:string	16	No
4	EXTERNALACCOUNT	External Account EIC	Unique identification of the external account (Shippers) that is defined by the adjacent System Operator	xs:string	35	No
4	EXTERNALACCOUNTT SO	External Account TSO EIC	Unique identification of the System Operator that created the External account identification	xs:string	16	No
4	PERIOD	Top-level hierarchy for Nomination details.				
5	TIMEINTERVAL	Start Date & Time End Date & Time	This field will represent the Nomination Period E.g. YYYY-MM-DDThh:mmZ/yyyy-mm-ddThh:mmZ 2015-10-30T08:15Z/2015-11-30T08:00Z	xs:string	35	Yes

5	DIRECTION.CODE	Gas Direction	This field represents the direction of flow Possible values: Z02 – Input Z03 – Output	xs:string	03	Yes
5	QUANTITY.AMOUNT	Nominated Quantity	This field represents the total quantity for the connection point within the time interval	xs:decimal	17	Yes
5	PRIORITY_STATUS.CODE	-	This field is not applicable for National Grid NTS. A default value of “NA” must be used	xs:string	03	No
5	DECOMPOSITION_QUANTITY	Top-level hierarchy for Decomposition Quantity details.				
6	TYPE	-	This field is not applicable for National Grid NTS. A default value of “NA” must be used	xs:string	03	No
6	AMOUNT	-	This field is not applicable for National Grid NTS. A default value of “0” must be used	xs:decimal	17	No

Note: The fields marked in **Grey** will have a default value of “NA” for string and “0” for numeric field as they are not applicable to National Grid NTS.

Request Schema Definition

Name of file: **geminiapinomintrequest.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="NOMINATION_DOCUMENT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="IDENTIFICATION" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="35"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="VERSION" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:integer">
              <xs:maxInclusive value="999"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TYPE" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="3"/>
              <xs:enumeration value="01G"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CREATIONDATETIME" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:dateTime">
      <xs:maxInclusive value="3999-01-01T00:00:00Z"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="VALIDITYPERIOD" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CONTRACTREFERENCE" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
      <xs:enumeration value="NA"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CONTRACTTYPE" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="03"/>
      <xs:enumeration value="NA"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="ISSUER_MARKETPARTICIPANT.IDENTIFICATION" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="ISSUER_MARKETPARTICIPANT.MARKETROLE.CODE" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="03"/>
      <xs:enumeration value="ZSH"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>

```

```

</xs:simpleType>
</xs:element>
<xs:element name="RECIPIENT_MARKETPARTICIPANT.MARKETROLE.CODE" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="03"/>
      <xs:enumeration value="ZSO"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="APPLICATIONCONTEXT" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="03"/>
      <xs:enumeration value="305"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CONNECTIONPOINT" minOccurs="1" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="IDENTIFICATION" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="35"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="MEASUREUNIT.CODE" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="03"/>
            <xs:enumeration value="KW2"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="NOMINATIONTYPE" minOccurs="1" maxOccurs="2">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="TYPE" minOccurs="1" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="03"/>
                  <xs:enumeration value="A01"/>
                  <xs:enumeration value="A02"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="ACCOUNT" minOccurs="1" maxOccurs="unbounded">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="INTERNALACCOUNT" minOccurs="1" maxOccurs="1">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="35"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```



```

</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="INTERNALACCOUNTTSO" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="EXTERNALACCOUNT" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="EXTERNALACCOUNTTSO" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD" minOccurs="1" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TIMEINTERVAL" minOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="35"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="DIRECTION.CODE" minOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="03"/>
            <xs:enumeration value="Z02"/>
            <xs:enumeration value="Z03"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="QUANTITY.AMOUNT" minOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:decimal">
            <xs:maxLength value="17"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PRIORITY_STATUS.CODE" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="3"/>
            <xs:enumeration value="NA"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```


Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	ACKNOWLEDGEMENT_DOCUMENT		Top-level hierarchy for Acknowledgement Document.			
Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
1	IDENTIFICATION	-	Unique Identification of the document	xs:string	35	Yes
1	VERSION	-	This field represents the version of the document being sent	xs:integer	3	No
1	TYPE	-	This field represents the type of request being sent. Possible values: 294 - Application Error and Acknowledgment	xs:string	3	Yes
1	CREATIONDATETIME	-	This field represents Date and time of the creation of the API request. E.g. YYYY-MM-DDThh:mm:ssZ 2015-10-30T08:15:30Z	xs:dateTime	20	Yes
1	VALIDITYPERIOD	-	This field represents the start and end date and time of the period of validity	xs:string	35	No
1	ISSUER_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who has issued the API request	xs:string	16	Yes
1	ISSUER_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who has issued the API request. Possible values: ZSO - Transmission System Operator	xs:string	3	Yes

1	RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who is receiving the API request	xs:string	16	Yes
1	RECIPIENT_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who is issuing the API request. Possible values: ZSH -Shipper	xs:string	3	No
1	APPLICATIONCONTEXT	-	Used for coded identification for an EIC location code. Possible values: 305 - EIC location code	xs:string	3	No
1	RECEIVING_DOCUMENT.IDENTIFICATION	-	Unique identification of the document being acknowledged (NOMINATION_DOCUMENT.IDENTIFICATION field from API request)	xs:string	35	No
1	RECEIVING_DOCUMENT.VERSION	-	Version of the document being acknowledged	xs:integer	3	No
1	RECEIVING_DOCUMENT.TYPE	-	Identification of the type of document being received	xs:string	3	No
1	RECEIVING_DOCUMENT.CREATIONDATETIME	-	The date and time of the creation of the original message	xs:dateTime	20	No
1	RECEIVING_DOCUMENT.PAYLOADNAME	-	The identification of the payload object used to transmit the document	xs:string	150	No
1	CONNECTIONPOINT	Top-level hierarchy for Connection Point.				
2	IDENTIFICATION	Connection Point	Unique identification (EIC) of a connection point	xs:string	35	Yes

2	MEASUREUNIT.CODE	Unit	This field represents the unit of measure which is applied to all the quantities in the API request. Possible values: KW2 - Kilowatt-hour per day (kWh/d)	xs:string	3	Yes
2	NOMINATIONTYPE	Top-level hierarchy for Nomination Type.				
3	TYPE	Nomination Type	This field represents whether the underlying information refers to a single sided nomination or a double sided nomination Possible values: A01 - Single Sided A02 - Double Sided	xs:string	3	Yes
3	ACCOUNT	Top-level hierarchy for Account				
4	INTERNALACCOUNT	BA	Unique identification of the internal account (Shippers) that is defined by the transmission System	xs:string	35	Yes
4	INTERNALACCOUNTTSO	-	Unique identification of the System Operator that created the internal account identification	xs:string	16	No
4	EXTERNALACCOUNT	External Account EIC	Unique identification of the external account (Shippers) that is defined by the adjacent System Operator	xs:string	35	No
4	EXTERNALACCOUNTTSO	External Account TSO EIC	Unique identification of the System Operator that created the External account identification	xs:string	16	No
4	PERIOD	Top-level hierarchy for Nomination details.				

5	TIMEINTERVAL	Start Date & Time End Date & Time	This field will represent the Nomination Period e.g. YYYY-MM-DDThh:mmZ/yyyy-mm-ddThh:mmZ 2015-10-30T08:15Z/2015-11-30T08:00Z	xs:string	35	Yes
5	DIRECTION.CODE	Gas Direction	This field represents the direction of flow Possible values: Z02 - Input Z03 - Output	xs:string	3	Yes
5	QUANTITY.AMOUNT	Nominated Quantity	This field represents the total quantity for the connection point within the time interval	xs:decimal	17	Yes
5	PRIORITY_STATUS.CODE	-	This field is not applicable for National Grid NTS. A default value of "NA" is provided	xs:string	3	No
5	REASON	Top-level hierarchy for Nomination Status.				
6	CODE	Status Code	This field represents the status of given quantity within a time interval	xs:string	2 5	Yes
6	REASON.TEXT	Reason Code	This field represents the textual explanation of the status code	xs:string	512	No

Response Schema Definition

Name of file: **geminiapinomintresponse.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
  <xs:element name="ACKNOWLEDGEMENT_DOCUMENT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="IDENTIFICATION" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="35"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="VERSION" minOccurs="0" maxOccurs="1">

```

```

<xs:simpleType>
  <xs:restriction base="xs:integer">
    <xs:maxInclusive value="999"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="TYPE" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="3"/>
      <xs:enumeration value="294"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CREATIONDATETIME" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:dateTime">
      <xs:maxInclusive value="3999-01-01T00:00:00Z"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="VALIDITYPERIOD" minOccurs="0" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="ISSUER_MARKETPARTICIPANT.IDENTIFICATION" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="ISSUER_MARKETPARTICIPANT.MARKETROLE.CODE" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="03"/>
      <xs:enumeration value="ZSO"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION" minOccurs="1"
maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="RECIPIENT_MARKETPARTICIPANT.MARKETROLE.CODE"
minOccurs="0" maxOccurs="1">
  <xs:simpleType>

```

```

        <xs:restriction base="xs:string">
            <xs:maxLength value="03"/>
            <xs:enumeration value="ZSH"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="APPLICATIONCONTEXT" minOccurs="0" maxOccurs="1">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="03"/>
            <xs:enumeration value="305"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="RECEIVING_DOCUMENT.IDENTIFICATION" minOccurs="0"
maxOccurs="1">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="35"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="RECEIVING_DOCUMENT.VERSION" minOccurs="0" maxOccurs="1">
    <xs:simpleType>
        <xs:restriction base="xs:integer">
            <xs:maxInclusive value="999"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="RECEIVING_DOCUMENT.TYPE" minOccurs="0" maxOccurs="1">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="3"/>
            <xs:enumeration value="01G"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="RECEIVING_DOCUMENT.CREATIONDATETIME" minOccurs="0"
maxOccurs="1">
    <xs:simpleType>
        <xs:restriction base="xs:dateTime">
            <xs:maxInclusive value="3999-01-01T00:00:00Z"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="RECEIVING_DOCUMENT.PAYLOADNAME" minOccurs="0"
maxOccurs="1">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="150"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
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```

```

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            <xs:enumeration value="Z03"/>
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```

```

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</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Error Code	Error Message
01G	Processed and accepted - The message has been processed and accepted.
04G	Received after deadline - The message has been received after a deadline has passed.
14G	Unknown account identification - The message contains an account identification that is unknown to the system.
61G	Invalid message sender - The identification of the message sender in UNB is invalid.
68G	Other - One or more problems that have not been specifically coded have been identified. A textual explanation will be provided.
77G	Not a valid quantity - The quantity is not according to the contractual agreements.
GEM_EU_API_ERROR_0003	Meter is not active within given period
GEM_EU_API_ERROR_0004	No valid activity present for the meter
GEM_EU_API_ERROR_0005	Not a valid Connection point
GEM_EU_API_ERROR_0007	No valid nomination matching relationship present for the meter
GEM_EU_API_ERROR_0009	Invalid re-nomination lead time
GEM_EU_API_ERROR_0024	Nomination has already been placed for a later hour bar. Please choose another hour bar.
GEM_EU_API_ERROR_0025	Re-nomination cannot be carried out for one or more hour bar as they are under processing. Please re-try after sometime. Alternatively, re-nomination can be carried out for different hour bar
GEM_EU_API_ERROR_0026	EXTERNALACCOUNTTSO is mandatory while placing nomination at Moffat.

GEM_API_ERROR_0065	FLOW RATE VALIDATION HAS FAILED FOR SOME OF THE STEPS OF THIS ACTIVITY.
GEM_API_ERROR_0079	THE GASDAY NOT WITHIN CURRENT NOMINATION PERIOD
GEM_EU_API_ERROR_0013	NORMAL FLOW NOMINATION IS LESS THAN OPPOSITE FLOW NOMINATION FOR THE METER ID
GEM_EU_API_ERROR_0014	EU Nominations regime is not active for the provided VALIDITYPERIOD
GEM_EU_API_ERROR_0015	TIMEINTERVAL is not within the VALIDITYPERIOD
GEM_EU_API_ERROR_0016	SSN or DSN for Connection Point, Gas Direction and Gas Day(s) combination already exists
GEM_EU_API_ERROR_0017	Receiving document Creation Date Time is greater than System Date Time
GEM_EU_API_ERROR_0019	EXPECTED FORMAT DURING NOMINATION WINDOW IS YYYY-MM-DDTST:00Z/YYYY-MM-DDTET:59Z
GEM_EU_API_ERROR_0020	Invalid RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION
GEM_EU_API_ERROR_0021	Invalid INTERNALACCOUNTTSO
GEM_EU_API_ERROR_0022	THE CONNECTION POINT IDENTIFICATION / PERIOD GAS DIRECTION COMBINATION DOES NOT EXIST FOR THE SELECTED GAS DAY(S)
GEM_EU_API_ERROR_0023	Issuer market participant EIC is incorrect
GEM_API_ERROR_0084	The data you require is currently locked by another user.

For more information relating to generic error messages, refer to the Gemini API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (e.g. to improve clarity).

2.1.2 EU Code Changes View IP Nomination API Spec

2.1.2.1 Overview

This specification contains the interface details (e.g. relevant URLs, request and response XML message formats, specific error messages) for the *View IP Nomination* API. For more general guidance on API function and usage, refer to the Gemini API Usage Guidelines.

The *View IP Nomination* API will be used to view Nominations and Re-Nominations at EU NTS Interconnector Points and Gas Day.

The *View IP Nomination* API can be accessed by Shippers.

The API response schema for *View IP Nomination* API is in line with Nomination Response message (NOMRES) defined under EDIG@S Nomination schemas V5.1 .

2.1.2.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to access the API

API clients must invoke the following URL to access this API's functionality:

</gemini/controllers/GemIPViewNomresControllerAPI/>

The XSD found at this URL can be used to validate the request XML format:

</gemini/api/schema/geminiapiviewnomresrequest.xsd>

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapiviewnomresresponse.xsd>

2.1.2.3 XML Specifications

2.1.2.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	NOMINATION_RESPONSE_REQ		Top-level hierarchy for View Nomination Response Request			

1	IDENTIFICATION	-	Unique Identification of the Nomination File	xs:string	35	Yes
1	VERSION	-	Version of the XML file being sent	xs:integer	03	Yes
1	TYPE	-	This field represents the type of request being sent. Possible Values: 08G - Nomination Response Document	xs:string	03	Yes
1	CREATIONDATETIME	-	This field represents Date and time of the creation of the API request. E.g. YYYY-MM-DDThh:mm:ssZ 2015-10-30T08:15:30Z	xs:dateTime	20	Yes
1	ISSUER_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who has issued the API request	xs:string	16	Yes
1	ISSUER_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who has issued the API request. Possible Values: ZSH - Shipper	xs:string	03	Yes
1	RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who is receiving the API request	xs:string	16	Yes
1	RECIPIENT_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who is issuing the API request. Possible Values: ZSO - Transmission System Operator	xs:string	03	Yes
1	APPLICATIONCONTEXT	-	This field represents the identification of a particular context that is significant to the recipient. Possible values: 305 - EIC location code	xs:string	03	No
1	CONNECTIONPOINT	Top-level hierarchy for Connection Point.				
2	IDENTIFICATION	Connection Point	Unique identification (EIC) of a connection point	xs:string	35	Yes

2	MEASUREUNIT.CODE	Unit	This field represents the unit of measure which is applied to all the quantities in the API request. Possible Values: KW2 - Kilowatt-hour per day (kWh/d)	xs:string	3	Yes
2	NOMINATIONTYPE	Top-level hierarchy for Nomination Type.				
3	TYPE	Nomination Type	This field represents whether the underlying information refers to a single sided nomination or a double sided nomination Possible Values: A01 - Single Sided A02 - Double Sided	xs:string	3	Yes
3	ACCOUNT	Top-level hierarchy for Account				
4	INTERNALACCOUNT	BA	Unique identification of the internal account (Shippers) that is defined by the Transmission System	xs:string	35	Yes
4	INTERNALACCOUNT T SO	-	Unique identification of the System Operator that created the internal account identification	xs:string	16	No
4	EXTERNALACCOUNT	External Account EIC	Unique identification of the external account (Shippers) that is defined by the adjacent System Operator	xs:string	35	No
4	EXTERNALACCOUNTT SO	External Account TSO EIC	Unique identification of the System Operator that created the External account identification	xs:string	16	No
4	INFORMATIONORIGIN_ TIMESERIES	Top-level hierarchy for the type of quantity being sent				
5	TYPE	-	Unique Identification of the Quantity that is requested. (Processed or Confirmed) Possible Values: 14G - Processed 16G - Confirmed	xs:string	03	Yes
5	PERIOD	Top-level hierarchy for Nomination details				

6	TIMEINTERVAL	Start Date & Time End Date & Time	This field will represent the Nomination Period e.g. YYYY-MM-DDThh:mmZ/yyyy-mm-ddThh:mmZ 2015-10-30T08:15Z/2015-11-30T08:00Z	xs:string	35	Yes
6	DIRECTION.CODE	Gas Direction	This field represents the direction of flow Possible Values: Z02 - Input Z03 - Output	xs:string	03	Yes

Request Schema Definition

Name of file: geminiapiviewnomresrequest.xsd

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="NOMINATION_RESPONSE_REQ">
    <xs:complexType>
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            </xs:restriction>
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              <xs:maxLength value="3"/>
              <xs:enumeration value="08G"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
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            </xs:restriction>
          </xs:simpleType>
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</xs:schema>
```



```

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```

```

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[illegible]

2.1.2.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	NOMINATION_RESPONSE	Top-level hierarchy for Nomination Response				

1	IDENTIFICATION	-	Unique Identification of the Nomination File	xs:string	35	Yes
1	VERSION	-	Version of the XML file being sent	xs:integer	03	Yes
1	TYPE	-	This field represents the type of request being sent. Possible Values: 08G - Nomination Document	xs:string	03	Yes
1	CREATIONDATETIME	-	This field represents Date and time of the creation of the API response. e.g. YYYY-MM-DDThh:mm:ssZ 2015-10-30T08:15:30Z	xs:dateTime	20	Yes
1	ISSUER_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who has issued the API response	xs:string	16	Yes
1	ISSUER_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who has issued the API response. Possible Values: ZSO - Transmission System Operator	xs:string	03	Yes
1	RECIPIENT_MARKETPARTICIPANT.IDENTIFICATION	-	Unique Identification (EIC) of the party who is receiving the API response	xs:string	16	Yes
1	RECIPIENT_MARKETPARTICIPANT.MARKETROLE.CODE	-	This field represents the role of the party who is issuing the API response. Possible Values: ZSH - Shipper	xs:string	03	Yes
1	APPLICATIONCONTEXT	-	This field represents the identification of a particular context that is significant to the recipient. Possible values: 305 - EIC location code	xs:string	03	No
1	CONNECTIONPOINT	Top-level hierarchy for Connection Point.				
2	IDENTIFICATION	Connection Point	Unique identification (EIC) of a connection	xs:string	35	Yes

2	MEASUREUNIT.CODE	Unit	This field represents the unit of measure which is applied to all the quantities in the API response. Possible Values: KW2 - Kilowatt-hour per day (kWh/d)	xs:string	03	Yes
2	NOMINATIONTYPE	Top-level hierarchy for Nomination Type.				
3	TYPE	Nomination Type	This field represents whether the underlying information refers to a single sided nomination or a double sided nomination Possible Values: A01 - Single Sided A02 - Double Sided	xs:string	03	Yes
3	ACCOUNT	Top-level hierarchy for Account				
4	INTERNALACCOUNT	BA	Unique identification of the internal account (Shippers) that is defined by the Transmission System Operator	xs:string	35	Yes
4	INTERNALACCOUNTTSO	-	Unique identification of the System Operator that created the internal account identification	xs:string	16	No
4	EXTERNALACCOUNT	External Account EIC	Unique identification of the external account (Shippers) that is defined by the adjacent System Operator	xs:string	35	No
4	EXTERNALACCOUNTTSO	External Account TSO EIC	Unique identification of the System Operator that created the External account identification	xs:string	16	No
4	INFORMATIONORIGIN_TIMESERIES	Top-level hierarchy for the type of quantity being sent				
5	TYPE	-	Unique Identification of the Quantity being sent. (Forward or Processed) Possible Values: 14G - Processed 16G - Confirmed	xs:string	03	Yes
4	PERIOD	Top-level hierarchy for Nomination details.				

5	TIMEINTERVAL	Start Date & Time End Date & Time	This field will represent the Nomination Period E.g. YYYY-MM-DDThh:mmZ/yyyy-mm-ddThh:mmZ 2015-10-30T08:15:30Z/2015-11-30T08:00:00Z	xs:string	35	Yes
5	DIRECTION.CODE	Gas Direction	This field represents the direction of flow Possible Values: Z02 - Input Z03 - Output	xs:string	03	Yes
5	QUANTITY.AMOUNT	Nominated Quantity	This field represents the total quantity for the connection point within the time interval	xs:decimal	17	Yes
5	STATUS					
5	CODE		This field represents the status of given quantity within a time interval	xs:string	25	No
5	REASON.TEXT		This field represents the textual explanation of the status code	xs:string	512	No

Response Schema Definition

Name of file: **geminiapiviewnomresresponse.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
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              <xs:maxLength value="35"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="VERSION" minOccurs="0" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:integer">
              <xs:maxInclusive value="999"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TYPE" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="3"/>
              <xs:enumeration value="08G"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

```

</xs:element>
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maxOccurs="1">
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      <xs:maxLength value="03"/>
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      <xs:maxLength value="03"/>
      <xs:enumeration value="305"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
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  <xs:complexType>
    <xs:sequence>
      <xs:element name="IDENTIFICATION" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="35"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
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    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="03"/>
        <xs:enumeration value="KW2"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="NOMINATIONTYPE" minOccurs="1" maxOccurs="2">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TYPE" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="03"/>
              <xs:enumeration value="A01"/>
              <xs:enumeration value="A02"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="ACCOUNT" minOccurs="1" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="INTERNALACCOUNT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="35"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="INTERNALACCOUNTTSO" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="16"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="EXTERNALACCOUNT" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="35"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="EXTERNALACCOUNTTSO" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="16"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="INFORMATIONORIGIN_TIMESERIES" minOccurs="1"

```



```

maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TYPE" minOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="03"/>
            <xs:enumeration value="14G"/>
            <xs:enumeration value="16G"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PERIOD" minOccurs="1" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="TIMEINTERVAL" minOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="35"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="DIRECTION.CODE" minOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="03"/>
                  <xs:enumeration value="Z02"/>
                  <xs:enumeration value="Z03"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="QUANTITY.AMOUNT" minOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:decimal">
                  <xs:maxLength value="17"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="STATUS" minOccurs="0" maxOccurs="unbounded">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="CODE" minOccurs="0">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="25"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="REASON.TEXT" minOccurs="0">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="512"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>

```

In addition to any generic error messages, this API can return the following specific error messages:

For more information relating to generic error messages, refer to the Gemini API Usage Guidelines.

2.1.3 EU Code Changes IP Entry Entitlement API Spec

2.1.3.1 Overview

This specification contains the interface details (e.g. relevant URLs, request and response XML message formats, specific error messages) for the *Entry IP Entitlement Report API*. Shippers can send this API to Gemini to query or view entry entitlements. This API will be sent by Shippers on an ad-hoc basis. For more general guidance on API function and usage, refer to the Gemini API Usage Guidelines.

The *Entry IP Entitlement Report API* provides the entry capacity entitlement data at Gemini Interconnector Points and Sub Transaction Period.

The *Entry IP Entitlement Report API* can be accessed by Shippers.

2.1.3.2 API URLs

All URLs are expressed relative to the root URL for the API service. Shippers are advised to parameterise URLs to minimise the impact of change.

URL to access the API

API clients must invoke the following URL to access this API's functionality:

</gemini/controllers/GemIPEntitlementsReportControllerAPI/>

The XSD found at this URL can be used to validate the request XML format:

</gemini/api/schema/geminiapiipentitlementreportreq.xsd>

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapiipentitlementreportres.xsd>

2.1.3.3 XML Specifications

2.1.3.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	IPEntryEntitlementReportQry	Top-level hierarchy for query elements.				
1	PRODUCT_TYPE	Product Type	Product type for which bids are queried. Allowed value - Entry Capacity	String	20	Yes

1	LCTN	Location	Interconnector ASEP associated with the method of sale. Location Code may be input for one or all locations. 'ALL' needs to be input for all locations	String	10	Yes
1	PERIOD_FROM	Period From	The start date from which the details will be queried. Date should be in the format YYYY-MM-DD	String	10	Yes
1	PERIOD_TO	Period To	The end date until which the details will be queried. Date should be in the format YYYY-MM-DD	String	10	Yes
1	TYPE_ENTLMNT	Type of Bundled	This field represents whether the API request is to query for bundled and/or un bundled entitlements Possible values: Bundled – To query for bundled entitlements only Unbundled – To query for unbundled entitlements only Aggregate – To query for aggregate of bundled and unbundled entitlements Both – To query for both bundled and unbundled entitlements separately	String	9	Yes

Request Schema Definition

Name of file: **geminiapiipentitlementreportreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:element name="IPEntryEntitlementReportQry">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="PRODUCT_TYPE" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TYPE_ENTLMNT" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="09"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:schema>

```

2.1.3.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	IPEntryEntitlementReportRes		Top-level hierarchy for output elements.		
1	METADATA		Top-level hierarchy for meta information elements		
2	TMSTMP		Timestamp of API access	DateTime	19

1	IPEntryEntitlementReportQry	Top-level hierarchy for query elements.			
1	HEADER	Top-level hierarchy for header fields.			
2	PRODUCT_TYPE	Product Type	Product type for which bids are queried.	String	20
2	LCTN	Location	The Interconnector Interconnector ASEP for which the data is requested	String	10
2	PERIOD_FROM	Period From	The start date from which the details will be queried. Date should be in the format YYYY-MM-DD	String	10
2	PERIOD_TO	Period To	The end date until which the details will be queried. Date should be in the format YYYY-MM-DD	String	10
2	TYPE_ENTLMNT	Type of Bundled	This field represents the type of entitlement which was queried. This field will be blank if the Gas Day queried is prior to 01-Oct- 2015	String	09
1	DETAIL	Top level hierarchy for record fields.			
2	LCTN	Location	The Interconnector ASEP for which the data is requested.	String	10
2	TYPE_ENTLMNT	Type of Bundled	This field represents the type of entitlement which was queried. This field will be blank if the Gas Day queried is prior to 01-Oct- 2015	String	09
2	GAS_DAY	Gas Day	Information will be retrieved for the Gas Day provided as part of this field This date should be within Transaction Period, and be in the format YYYY-MM-DD	Date	10
2	BA_CODE	Business Associate	The BA Code for an External User, as registered in the system, for which the Entitlements are queried	String	03

2	NET_CAPACITY	Net Capacity	The sum of Net Firm and Net Scaled Interruptible Entitlements for the queried Interconnector ASEP for a particular User and Gas Day	Long	13
2	NET_FIRM	Net Firm	The Net Firm Entitlements for the queried Interconnector ASEP for a particular User and Gas Day	Long	13
2	NET_INTERR	Net Interruptible	The Net Interruptible Entitlements for the queried Interconnector ASEP for a particular User and Gas Day	Long	13
2	NET_SCALED_INTERR	Net Scaled Interruptible	The Net Interruptible Entitlements, after any Constraints or Restorations	Long	13

Response Schema Definition

Name of file: **geminiapiipentitlementreportres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="IPEntryEntitlementReportRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name="IPEntryEntitlementReportQry" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT_TYPE" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="10"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="10"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="TYPE_ENTLMNT" minOccurs="1" maxOccurs="1">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="9"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DETAIL" minOccurs="1" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TYPE_ENTLMNT" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="9"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="GAS_DAY" type="xs:date" minOccurs="1" maxOccurs="1"/>
      <xs:element name="BA_CODE" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="3"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="NET_CAPACITY" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="NET_FIRM" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="NET_INTERR" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="NET_SCALED_INTERR" minOccurs="1" maxOccurs="1" type="xs:long"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>

```


</xs:schema>

2.1.3.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Error Code	Error Message
GEM_API_ERROR_0006	Period To cannot be less than Period From
GEM_API_ERROR_0400	Product Type is incorrect
GEM_API_ERROR_0401	Invalid type of Entitlement
GEM_API_ERROR_0402	Location not an Interconnector Point
GEM_API_ERROR_0403	Incorrect date format of Period From/ Period To

For more information relating to generic error messages, refer to the Gemini API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (e.g., to improve clarity).

2.2 Energy Balancing

2.2.1 Shipper Preliminary Balance

2.2.1.1 Overview

This API retrieves the breakdown of the input and output Nominations details for the primary BA for a specified gas day. The API gives the breakdown of the BA's Nominations and the corresponding net balance on the input side as well as the output side.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

*** COR1154 changes begin ***

UK Link DBI Programme changes the way the Demand Forecast and Allocation is calculated in Gemini and also introduces the Unidentified Gas (UG). This will be a new Output Meter Type – 'UG'.

The Output Balance will consist of 'UG' meters along with Daily and Non – Daily meters. This API specification document covers the inclusion of Unidentified Gas to the Output Balance details.

*** COR1154 changes end ***

2.2.1.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

</gemini/controllers/ShipperPreliminaryBalanceControllerAPI/>

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

</gemini/api/schema/geminiapishrprelimbalreq.xsd>

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapishrprelimbalres.xsd>

2.2.1.3 XML Specifications

2.2.1.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	SHPR_PRLIM_BAL_QR	Top level hierarchy for query elements			
1	GAS_DAY	Gas day for which the BA balance details for the entire system are requested.	Date	10	Yes

Schema Definition

Name of file: **geminiapishrprelimbalreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_PRLIM_BAL_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.1.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	SHPR_PRLIM_BAL_OUT	Top level hierarchy for the response elements		
1	METADATA	Top level hierarchy for meta information elements		

2	TMSTMP	Time stamp of API access	DateTime	19
1	SHPR_PRLIM_BAL_QRY	Top level hierarchy for the query elements		
2	GAS_DAY	Gas day for which the BA balance details for the entire system are requested.	Date	10
1	DTL	Top-level hierarchy for details		
2	NRG_DTL	Top-level hierarchy for overall energy details		
3	IP_BAL	Top-level hierarchy for Input energy details		
4	TRNS_IP	The Top-level hierarchy for the sum of all the requested & scheduled transportation Nominations for the specified gas day.		
5	REQ_NRG	The requested transport input energy (kWh)	Long	-
5	SCHD_NRG	The scheduled transport input energy (kWh)	Long	-
4	STRG_IP	The Top-level hierarchy for the requested & scheduled Storage Input Nominations for the specified gas day.		
5	REQ_NRG	The requested storage input energy (kWh)	Long	-
5	SCHD_NRG	The scheduled storage input energy (kWh)	Long	-
4	TRD_BUY	The Top-level hierarchy for the sum of all requested & scheduled Input OTC gas trades Nominations for the specified gas day		
5	REQ_NRG	The requested Trades Buy energy (kWh)	Long	-
5	SCHD_NRG	The scheduled Trades Buy energy (kWh)	Long	-
4	OCM_NBP_BUYS	The Top-level hierarchy for the sum of all requested & scheduled Input OCM title trade Nominations for the specified gas day		
5	REQ_NRG	The requested OCM NBP Buy energy (kWh)	Long	-
5	SCHD_NRG	The scheduled OCM NBP Buy energy (kWh)	Long	-
4	OCM_PHY	The Top-level hierarchy for the sum of all requested & scheduled Input Physical/locational Nominations for the specified gas day conducted either through the OCM.		
5	REQ_NRG	The requested OCM Physical energy (kWh)	Long	-
5	SCHD_NRG	The scheduled OCM Physical energy (kWh)	Long	-
4	FLEXBLTY	The Top-level hierarchy for the sum of all requested & scheduled Input Flexibility Nominations for the specified gas day		
5	REQ_NRG	The requested Flexibility energy (kWh)	Long	-

5	SCHD_NRG	The scheduled Flexibility energy (kWh)	Long	-
4	TOT_INP	The Top-level hierarchy for the net sum of all the requested & scheduled Input quantities excluding Flexibility Nominations		
5	REQ_NRG	The Total requested energy (kWh)	Long	-
5	SCHD_NRG	The Total scheduled energy (kWh)	Long	-
3	OP_BAL	Top-level hierarchy for Output energy details.		
4	DM_SHR	Top-level hierarchy for the sum of the requested & scheduled energy for the Daily Metered, Daily Metered Aggregate and the Shrinkage Nominations for the specified gas day		
5	REQ_NRG	The DMCs/DMA/ Shrinkage requested energy (kWh)	Long	-
5	SCHD_NRG	The DMCs/DMA/ Shrinkage scheduled energy (kWh)	Long	-
4	NDM	Top-level hierarchy for the sum of the requested & scheduled energy for all the Non- Daily Metered sites for the specified gas day		
5	REQ_NRG	The Non-Daily Metered requested energy (kWh)	Long	-
5	SCHD_NRG	The Non-Daily Metered scheduled energy (kWh)	Long	-
4	UIG	Top-level hierarchy for the sum of the requested & scheduled energy for all the Unidentified Gas Meters for the specified gas day		
5	REQ_NRG	The Unidentified Gas Metered requested energy (kWh). This can either be a positive or a negative value	Long	-
5	SCHD_NRG	The Unidentified Gas Metered scheduled energy (kWh). This can either be a positive or a negative value	Long	-
4	STRG_OP	Top-level hierarchy for the sum of all the requested & scheduled Storage Output Nominations for the specified gas day		
5	REQ_NRG	The Storage Output requested energy (kWh)	Long	-
5	SCHD_NRG	The Storage Output scheduled energy (kWh)	Long	-
4	TRD_SELL	Top-level hierarchy for the sum of all requested & scheduled Output OTC gas trades Nominations for the specified gas day		
5	REQ_NRG	The Trades Sell requested energy (kWh)	Long	-
5	SCHD_NRG	The Trades Sell scheduled energy (kWh)	Long	-

4	OCM_NBP_SELLS	Top-level hierarchy for the sum of all requested & scheduled Output OCM title trade Nominations for the specified gas day		
5	REQ_NRG	The OCM NBP Sells requested energy (kWh)	Long	-
5	SCHD_NRG	The OCM NBP Sells scheduled energy (kWh)	Long	-
4	OCM_PHY	Top-level hierarchy for the sum of all requested & scheduled Output Physical/locational Nominations for the specified gas day conducted through the OCM.		
5	REQ_NRG	The OCM Physical requested energy (kWh)	Long	-
5	SCHD_NRG	The OCM Physical scheduled energy (kWh)	Long	-
4	FLEXBLTY	Top-level hierarchy for the sum of all requested & scheduled Output Flexibility Nominations for the specified gas day		
5	REQ_NRG	The Flexibility requested energy (kWh)	Long	-
5	SCHD_NRG	The Flexibility scheduled energy (kWh)	Long	-
4	TOT_OP	Top-level hierarchy for the net sum of all the output quantities excluding Flexibility Nominations		
5	REQ_NRG	The total output requested energy (kWh)	Long	-
5	SCHD_NRG	The total output scheduled energy (kWh)	Long	-
3	NET_BAL	Top-level hierarchy for the net balance of the requested & scheduled input and output energies		
4	REQ_NRG	The net balance of input & output requested energy (kWh) This can either be a positive or a negative value	Long	-
4	SCHD_NRG	The net balance of input & output scheduled energy (KWh) This can either be a positive or a negative value	Long	-

Schema Definition

Name of file: **geminiapishprprelimbalres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="ENERGY_VALUE">
    <xs:restriction base="xs:long"/>
  </xs:simpleType>
  <xs:element name="SHPR_PRLIM_BAL_OUT">
    <xs:complexType>
      <xs:sequence>
```

```

<xs:element name="METADATA">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TMSTMP" type="xs:dateTime"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SHPR_PRLIM_BAL_QRY">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="GAS_DAY" type="xs:date"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:choice>
      <xs:element name="NRG_DTL">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="IP_BAL">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="TRNS_IP">
                    <xs:complexType>
                      <xs:sequence>
                        <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
                        <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
                      </xs:sequence>
                    </xs:complexType>
                  </xs:element>
                  <xs:element name="STRG_IP">
                    <xs:complexType>
                      <xs:sequence>
                        <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
                        <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
                      </xs:sequence>
                    </xs:complexType>
                  </xs:element>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="TRD_BUY">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
                  <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="OCM_NBP_BUYS">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
                  <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="OCM_PHY">

```

```

<xs:complexType>
  <xs:sequence>
    <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
    <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="FLEXBLTY">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
      <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="TOT_IP">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
      <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="OP_BAL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="DM_SHR">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="NDM">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="UIG">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="STRG_OP">
        <xs:complexType>
          <xs:sequence>

```

```

        <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
        <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="TRD_SELL">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="OCM_NBP_SELLS">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="OCM_PHY">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="FLEXBLTY">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="TOT_OP">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="NET_BAL">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="REQ_NRG" type="ENERGY_VALUE"/>
            <xs:element name="SCHD_NRG" type="ENERGY_VALUE"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>

```



```

</xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.1.4 API Specific Error Messages

None

2.2.2 System Nomination Balance

2.2.2.1 Overview

This API retrieves the Nominations Balance details at a system level for a gas day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.2.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/SystemNomBalanceControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapisystemnombalancereq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapisystemnombalanceres.xsd

2.2.2.3 XML Specifications

2.3.2.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	SYS_BAL_NOM_QR	Top level hierarchy for query elements			

1	GAS_DAY	Gas day for which Nominations balance details are requested.	Date	10	Yes
---	---------	--	------	----	-----

Schema Definition

Name of file: **geminiapisystemnombalancereq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SYS_BAL_NOM_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.3.2.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	SYS_BAL_NOM_OU	Top level hierarchy for query elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	SYS_BAL_NOM_QRY	Top level hierarchy for query elements For child element details please refer to the request specification		
2	GAS_DAY	Gas day for which Nominations balance details	Date	10
1	DTL	Top-level hierarchy for details.		
2	NRG_DTL	Top-level hierarchy for the overall energy details.		
3	REQ_NRG_DTL	Top-level hierarchy for the requested energy details.		
4	IP_BAL	The total amount of energy requested to be flowed into the NBP (kWh)	Long	-
4	OP_BAL	The total amount of energy requested to be flowed out of the NBP (kWh)	Long	-
4	NET_BAL	The difference between the requested input balance and requested output balance (kWh) This can either be a positive or a negative value	Long	-
3	SCHD_NRG	Top-level hierarchy for the scheduled energy details.		

4	IP_BAL	The total amount of energy scheduled to be flowed into the NBP (kWh)	Long	-
4	OP_BAL	The total amount of energy scheduled to be flowed out of the NBP (kWh)	Long	-
4	NET_BAL	The difference between the scheduled input balance and scheduled output balance (kWh) This can either be a positive or a negative value	Long	-

Schema Definition

Name of file: **geminiapisystemnombalanceres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="ENERGY_VALUE">
    <xs:restriction base="xs:long"/>
  </xs:simpleType>
  <xs:element name="SYS_BAL_NOM_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="SYS_BAL_NOM_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="NRG_DTL">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="REQ_NRG">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="IP_BAL" type="ENERGY_VALUE"/>
                          <xs:element name="OP_BAL" type="ENERGY_VALUE"/>
                          <xs:element name="NET_BAL" type="ENERGY_VALUE"/>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                    <xs:element name="SCHD_NRG">
                      <xs:complexType>
```

```

<xs:sequence>
  <xs:element name="IP_BAL" type="ENERGY_VALUE"/>
  <xs:element name="OP_BAL" type="ENERGY_VALUE"/>
  <xs:element name="NET_BAL" type="ENERGY_VALUE"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.2.4 API Specific Error Messages

None

2.2.3 View INS Nominations

2.3.3.1 Overview

This API retrieves the existing INS Nominations in descending order of the Gas Day. This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.3.3.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ViewINSNominationControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapiviewwinsnominationsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapiviewwinsnominationsres.xsd

2.3.3.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

3.1.3.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	VW_INS_NMS_QR	Top level hierarchy for query elements			
1	EFF_ST_DT	The date from which the INS Nominations needs to be retrieved.	Date	10	Yes
1	EFF_END_DT	The date till which the INS Nominations needs to be retrieved.	Date	10	Yes

Schema Definition

Name of file: **geminiapiviewinsnominationsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_INS_NMS_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="EFF_ST_DT" type="xs:date"/>
        <xs:element name="EFF_END_DT" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

3.1.3.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	VW_INS_NMS_OU	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	VW_INS_NMS_QR	Top level hierarchy for query elements		
2	EFF_ST_DT	The date from which the INS Nominations needs to be retrieved.	Date	10
2	EFF_END_DT	The date till which the INS Nominations needs to be retrieved.	Date	10

1	DTL	Top-level hierarchy for Details.		
2*	INS_NM_DTL	Top-level hierarchy for INS Nomination Headers.		
3	GAS_DAY	Gas day for which the INS Nominations are to be retrieved.	Date	10
3	PROJ_EOD_IMBAL	This is a positive or negative value, which indicates the intended end of the day imbalance (or INS Nomination) in kWh	Long	13

Schema Definition

Name of file: **geminiapiviewinsnominationsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_INS_NMS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="VW_INS_NMS_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="EFF_ST_DT" type="xs:date"/>
              <xs:element name="EFF_END_DT" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:choice>
              <xs:element name="INS_NM_DTL" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="GAS_DAY" type="xs:date"/>
                    <xs:element name="PROJ_EOD_IMBAL">
                      <xs:simpleType>
                        <xs:restriction base="xs:long">
                          <xs:totalDigits value="13"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.3.3.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_008	End Date should be greater than or equal to Start Date

2.2.4 View Re-nomination Details

2.2.4.1 Overview

Using this API, the BA can retrieve step details of an input/output Re-nomination for a gas day. The input / output Re-nominations are differentiated based on the service identifier.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

*** COR1154 changes begin ***

UK Link DBI Programme changes the way the Demand Forecast and Allocation is calculated in Gemini and also introduces the Unidentified Gas (UIG). As part of the Demand Forecast calculation if the Daily Meters Nominations are not available, system estimates the Nomination for the purpose of accurate Unidentified Gas calculation. These estimated Nominations are marked with Requested Status 'E'.

This API specification document covers the inclusion of estimated Nominations in the API response.

*** COR1154 changes end ***

2.2.4.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ViewRenominationDetailsControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapiviewrenominationdetailsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapiviewrenominationdetailsres.xsd

2.2.4.3 XML Specifications

2.2.4.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	VW_RNM_DTLS_QR	Top level hierarchy for query elements			
1	GAS_DAY	Gas Day for which re-nominations are retrieved	Date	10	Yes
1	SERV_ID	Unique ID associated to a BA's service	String	15	Yes
1	ACTVTY_NBR	Unique identifier for an activity under a service for a BA	Integer	6	Yes
1	SF	Special Function indicates the Re-nomination type. The permissible values are: AF - Accepted Flex bid OC – OCM Re-nomination Spaces(' ')- Normal Re-nomination The values are Case sensitive.	String	2	No

Schema Definition

Name of file: **geminiapiviewre-nominationdetailsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_RNM_DTLS_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="SERV_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="15"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="ACTVTY_NBR">
          <xs:simpleType>
            <xs:restriction base="xs:int">
              <xs:totalDigits value="6"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```



```

</xs:simpleType>
</xs:element>
<xs:element name="SF" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value=""/>
      <xs:enumeration value="AF"/>
      <xs:enumeration value="OC"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.4.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	VW_RNM_DTLS_OU	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	VW_RNM_DTLS_QR	Top level hierarchy for query elements		
2	GAS_DAY	Gas Day for which Re-nominations are retrieved	Date	10
2	SERV_ID	Unique ID associated to a BA's service	String	15
2	ACTVTY_NBR	Unique identifier for an activity under a service for a BA	Integer	6
2	SF	Special Function indicates the Re-	String	2
1	DTL	Top-level hierarchy for Details.		
2	RNM_DTL	Top-level hierarchy for Re-nominations.		
3	RNM_HDR	Top-level hierarchy for Re-nominations Headers.		
4	GAS_DAY	Gas Day for which Re-nominations are retrieved	Date	10
4	SERV_ID	Unique ID associated to a BA's Service	String	15
4	ACTVTY_NBR	Unique identifier for an activity under a Service for a BA	Integer	6
4	SF	Special Function indicates the Re-nomination type. AF - Accepted Flex bid OC - OCM Re-nomination Spaces (' ') - normal Re-nomination	String	2
4	BA_CD	Business Associate Short Code	String	3
4	RT_SCHD	Type of BA service	String	10
4	OBO	The OBO party in case the activity is for a Gas Trade	String	3
4	METER_ID	Unique identifier for a meter	String	10

4	OPP_FL	Flag to indicate the direction of flow The permissible values are: N - Indicates that it is a normal flow Nomination / Re-nomination Y - Indicates that it is an opposite flow Nomination / Re-nomination	String	1
4	I_O_IND	Flag to indicate the direction of flow The permissible values are: I - Input O - Output	String	1
4	BUY_SELL_IND	Flag to indicate whether the trade is a Buy or sell B - Buy Trade S - Sell Trade	String	1
3	RNM_DTLS_INF	The detail record for re-nomination		
4*	RNM_INF	The detail record for re-nomination info		
5	STRT_TM	The time from when the nominated/re-nominated energy should begin to flow. The permissible values are from 0 to 23.	Integer	2
5	CV	Calorific Value.	Float	6,4
5	VOL	Volume of Gas nominated for that Re-nomination Step.	Float	11,5
5	REQ_STS	The Status of the entered Nominations/Re-nominations The permissible values are: N - Nominated A - Approved R - Rejected E - Estimated	String	1
5	REQ_NRG	This gives the amount of energy requested for the step	Long	13
5	STEP_NRG	This gives the amount of energy to be flowed at that particular step.	Long	13
5	DAY_RATE	The flow rate per day	Float	11,5
5	PRCNT_CHNG	The percentage change in the amount of energy to be flowed. This is calculated based on the scheduled Energy.	Integer	7

5	CMT_TMSTMP	This gives the time at which the Nomination/Re-nomination was committed.	DateTime	20
---	------------	--	----------	----

Schema Definition

Name of file: **geminiapiviewre-nominationdetailsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_RNM_DTLS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="VW_RNM_DTLS_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="SERVC_ID">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="15"/>
                  </xs:restriction>
                </xs:simpleType>
              <xs:element name="ACTVTY_NBR">
                <xs:simpleType>
                  <xs:restriction base="xs:int">
                    <xs:totalDigits value="6"/>
                  </xs:restriction>
                </xs:simpleType>
              <xs:element name="SF" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value=""/>
                    <xs:enumeration value="AF"/>
                    <xs:enumeration value="OC"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:choice>
              <xs:element name="RNM_DTL">
                <xs:complexType>
```

```

<xs:sequence>
  <xs:element name="RNM_HDR">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="SERVC_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="15"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="ACTVTY_NBR">
          <xs:simpleType>
            <xs:restriction base="xs:int">
              <xs:totalDigits value="6"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="SF" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value=""/>
              <xs:enumeration value="AF"/>
              <xs:enumeration value="OC"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="BA_CD">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="3"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="RT_SCHD">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="OBO" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="3"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="METER_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:sequence>

```

```

<xs:element name="OPP_FL">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="I_O_IND">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="BUY_SELL_IND" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="RNM_DTLS_INF">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="RNM_INF" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="STRT_TM">
              <xs:simpleType>
                <xs:restriction base="xs:nonNegativeInteger">
                  <xs:minInclusive value="0"/>
                  <xs:maxInclusive value="23"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="CV">
              <xs:simpleType>
                <xs:restriction base="xs:float"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="VOL">
              <xs:simpleType>
                <xs:restriction base="xs:float"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="REQ_STS">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value="N"/>
                  <xs:enumeration value="A"/>
                  <xs:enumeration value="R"/>
                  <xs:enumeration value="E"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

</xs:simpleType>
</xs:element>
<xs:element name="REQ_NRG">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="STEP_NRG">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="DAY_RATE">
  <xs:simpleType>
    <xs:restriction base="xs:float"/>
  </xs:simpleType>
</xs:element>
<xs:element name="PRCNT_CHNG">
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:totalDigits value="7"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CMT_TMSTMP" type="xs:dateTime"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.4.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 3.5.2. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

2.2.4.5 Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_0051	Invalid Service Id for the BA

2.2.5 View Shipper Trade Details

2.2.5.1 Overview

Using this API, BA will be able to retrieve their gas trade details for a gas day. The API provides the following information to the BA:

1. Whether the trading partner has made a Nomination
2. The details of the Nomination made by the trading partner

The status of the Nominations made by both the BA and their trading partner.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.5.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ViewShprTradeDetailsControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapishprtradedetailsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapishprtradedetailsres.xsd

2.2.5.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.5.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	SHPR_TRD_DTL_OR	Top level hierarchy for query elements			
1	GAS_DAY	Gas day for which the gas trades where registered.	Date	10	Yes
1	MATCH_YN	This to specify whether matched or	String	1	No

		trades are to be retrieved. The permissible values are: Y - Matching trades to be retrieved. N - Non-matching trades to be retrieved. If this field is omitted, all trades irrespective of whether they are matched or not will be retrieved.			
1	STS	Status of the Trade The permissible values are: N - Nominated A - Approved R - Rejected	String	1	No

Schema Definition

Name of file: **geminiapishprtradedetailsreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_TRD_DTL_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="MATCH_YN" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Y"/>
              <xs:enumeration value="N"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="STS" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="A"/>
              <xs:enumeration value="N"/>
              <xs:enumeration value="R"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

2.2.5.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	SHPR_TRD_DTL_OU	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	SHPR_TRD_DTL_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
2	GAS_DAY	Gas day for which the gas trades where registered.	Date	10
2	MATCH_YN	This to specify whether matched or unmatched trades are to be retrieved. The permissible values are: Y - Matching trades to be retrieved. N - Non-matching trades to be retrieved. If this field is omitted, all trades irrespective of whether they are matched or not will be retrieved.	String	1
2	STS	Status of the Trade The permissible values are: N - Nominated A - Approved R - Rejected	String	1
1	DTL	Top-level hierarchy for Details.		
2*	SHPR_TRD_DTL	Top-level hierarchy for Shipper Trade Details.		
3	BUY_DTL	Top-level hierarchy for Buy Details.		
4	BA_CD	The BA involved in the buy trade	String	3
4	REQ_NRG	The amount of energy nominated by the BA	Long	13
4	REQ_STS	The status of the trade. The permissible values are: N - Nominated A - Approved R - Rejected	String	1
4	RSN_CD	The reason for rejecting the buy bid.	String	5
4	SCHD_NRG	The approved energy value.	Long	13
3	SELL_DTL	Top-level hierarchy for Sell Details.		
4	BA_CD	The BA involved in the sell trade	String	3
4	REQ_NRG	The amount of energy nominated by the BA	Long	13

4	REQ_STS	The status of the trade. The permissible values are: N - Nominated A - Approved R - Rejected	String	1
4	RSN_CD	The reason for rejecting the sell bid.	String	5
4	SCHD_NRG	The approved energy value.	Long	13

Schema Definition

Name of file: **geminiapishprtradedetailsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="ENERGY_VALUE">
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="SHPR_TRD_DTL_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="SHPR_TRD_DTL_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="MATCH_YN" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="Y"/>
                    <xs:enumeration value="N"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="STS" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="A"/>
                    <xs:enumeration value="N"/>
                    <xs:enumeration value="R"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:element name="DTL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SHPR_TRD_DTL" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="BUY_DTL">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="BA_CD">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="3"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="REQ_NRG" type="ENERGY_VALUE" minOccurs="0"/>
                  <xs:element name="REQ_STS" minOccurs="0">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="1"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="RSN_CD" minOccurs="0">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="5"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="SCHD_NRG" type="ENERGY_VALUE" minOccurs="0"/>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="SELL_DTL">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="BA_CD">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="3"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="REQ_NRG" type="ENERGY_VALUE" minOccurs="0"/>
                  <xs:element name="REQ_STS" minOccurs="0">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="1"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="RSN_CD" minOccurs="0">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">

```

None

2.2.6.1 Overview

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the [API Usage Guidelines](#) document.

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

/gemini/controllers/StorageOutputClaimsControllerAPI/

/gemini/api/schema/geminiapistorageoutputclaimsreq.xsd

/gemini/api/schema/geminiapistorageoutputclaimsres.xsd

2.2.6.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.6.3.1 API Request Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	STRG_OP_CLMS_QRY	Top level hierarchy for query elements			
1	GAS_DAY	The gas day for which the storage output claims are retrieved	Date	10	Yes
1	METER_ID	The meter Id for which the storage output claims are retrieved	String	10	Yes

Schema Definition

Name of file: **geminiapistorageoutputclaimsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="STRG_OP_CLMS_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="METER_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.6.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	STRG_OP_CLMS_OUT	Top level hierarchy for query elements		
1	METADATA	Top level hierarchy for meta information elements		

2	TMSTMP	Time stamp of API access	DateTime	19
1	STRG_OP_CLMS_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
2	GAS_DAY	The gas day for which the storage output claims are retrieved	Date	10
2	METER_ID	The meter Id for which the storage output claims are retrieved	String	10
1	DTL	Top-level hierarchy for Details.		
2	STRG_OP_DTL	Top-level hierarchy for Storage Output Details.		
3	HDR_DTL	Top-level Header Details.		
4	FIRM_METER_NO	The firm meter id.	String	10
4	INTR_METER_NO	The interruptible meter id.	String	10
4	MSRD_QTY	The quantity of energy measured for the specified meter id / gas day (kWh).	Long	13
3*	CLM_DTL	Top-level Claim Details.		
4	SHPR_NM	The BA's abbreviated name.	String	12
4	FLOW_TYPE	The flow type of the meter. The permissible values are: F - Firm I - Interruptible	String	1
4	NET_NMTD_QTY	Indicates the net nominated quantity (kWh)	Long	13
4	NET_CURR_ALLOC_QTY	Indicates the net current allocated quantity (kWh)	Long	13
4	CLMD_QTY	Indicates the claimed quantity (kWh)	Long	13
3	TRLR_DTL	Top-level hierarchy for Trailer Details		
4	TOT_ALLOC_QTY	Indicates the total net current allocated quantity	Long	-
4	TOT_CLM_QTY	Indicates the total claimed quantity (kWh).	Long	-

Schema Definition

Name of file: **geminiapistorageoutputclaimsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="STRG_OP_CLMS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element name="GAS_DAY" type="xs:date"/>
    <xs:element name="METER_ID" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="STRG_OP_DTL">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="HDR_DTL">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="FIRM_METER_NO" type="xs:string"/>
                  <xs:element name="INTR_METER_NO" type="xs:string"/>
                  <xs:element name="MSRD_QTY" type="xs:long"/>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="CLM_DTL" minOccurs="0" maxOccurs="unbounded">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="SHPR_NM">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="12"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="FLOW_TYPE">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="1"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="NET_NMTD_QTY" type="xs:long"/>
                  <xs:element name="NET_CURR_ALLOC_QTY" type="xs:long"/>
                  <xs:element name="CLMD_QTY" type="xs:long"/>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="TRLR_DTL">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="TOT_ALLOC_QTY" type="xs:long"/>
                  <xs:element name="TOT_CLM_QTY" type="xs:long"/>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.6.4 API Specific Error Messages

None

2.2.7 Meter to Zone Relationship

2.2.7.1 Overview

This API is used to retrieve the relationship between the Meter and its locational Zone. It provides a list of all Zone relationships that exist for the specified Meter. This relationship is established for BL, BN, DC, DF, DI, US and NA Meter Types, and optional for OS, SE, ST, SX, XF and XI Meter Types. Results may be retrieved only for Meters that are associated to the BA account, or those that the BA has authority to view.

2.2.7.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:
/gemini/controllers/MTRDetailsControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:
/gemini/api/schema/geminiapimeterzonerelationshipreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:
/gemini/api/schema/geminiapimeterzonerelationshipres.xsd

2.2.7.3 XML Specifications

2.2.7.3.1 API Request Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandator y
0	VW_MTR_ZON_RL	Top-level hierarchy for view elements.				

1	MTR_ID	Meter ID	Unique Identifier of the meter.	String	10	Y
---	--------	----------	---------------------------------	--------	----	---

Schema Definition

Name of file: **geminiapimeterzonerelationshipreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_MTR_ZON_RLP">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MTR_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
              <xs:minLength value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.7.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	VW_MTR_ZON_DTLS_OUT	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access	DateTime	19
1	VW_MTR_ZON_DTLS_QRY	Top-level hierarchy for query elements.			
2	MTR_ID	Meter ID	Unique Identifier of the meter	String	10
1	DTL	Top-level hierarchy for Details.			
2	MTR_ZON_DTLS_HD	Top-level hierarchy for Meter-Zones.			
3	MTR_ID	Meter ID	Unique Identifier of the meter.	String	10
3	MTR_NAME	Meter Name	Meter Name	String	40
3	MTR_TYPE	Meter Type	Meter Type	String	2
2*	MTR_ZON_DTLS_IN	The detail record for Meter-Zones.			
3	LCTN_CD	Zone Id	Unique identifier of the zone to which the meter	String	10

3	LCTN_DESC	Zone Name	Description of the zone where meter is located.	String	200
3	EFF_ST_DT	Effective Start Date	Date from which the zone relationship will be effective.	Date	10
3	EFF_END_DT	Effective End Date	Date to which the zone relationship will be effective.	Date	10
3	ACTV_IND	Active Indicator	A flag to indicate Zone Relationship is active or inactive for a Meter. The possible values are: N - Indicates that Meter to Zone relationship is not active Y - Indicates that Meter to Zone relationship is active	String	1

Schema Definition

Name of file: **geminiapimeterzonerelationshippres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_MTR_ZON_DTLS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="VW_MTR_ZON_DTLS_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="MTR_ID">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="MTR_ZON_DTLS_HDR">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="MTR_ID">
                      <xs:simpleType>

```

```

        <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="MTR_NAME">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="MTR_TYPE">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:length value="2"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="MTR_ZON_DTLS_INF" minOccurs="0" maxOccurs="unbounded">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="LCTN_CD">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:maxLength value="10"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="LCTN_DESC">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:maxLength value="200"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="EFF_ST_DT" type="xs:date"/>
            <xs:element name="EFF_END_DT" type="xs:date" minOccurs="0"/>
            <xs:element name="ACTV_IND">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:enumeration value="N"/>
                        <xs:enumeration value="Y"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
        </xs:sequence>
    </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>

```

```
</xs:complexType>
</xs:element>
</xs:schema>
```

2.2.7.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_0301	Invalid Meter Id for the

2.2.8 Price Information History

2.2.8.1 Overview

This API allows the market operator to retrieve the SAP, SMP (buy) and SMP (sell) information for a given gas day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.8.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/PriceInformationHistoryControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapipriceinformationhistoryreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapipriceinformationhistoryres.xsd

2.2.8.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.8.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	PR_INFO_HSTRY_QR	Top level hierarchy for query elements			
1	GAS_DAY	The gas day that the price information relates to.	Date	10	Yes
1	MKT_OP_CD	Market Operator short code for which the price information history is retrieved.	String	3	Yes

Schema Definition

Name of file: **geminiapipriceinformationhistoryreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="PR_INFO_HSTRY_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="MKT_OP_CD">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="3"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.8.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	PR_INFO_HSTRY_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	PR_INFO_HSTRY_QRY	Top level hierarchy for query elements		
2	GAS_DAY	The gas day that the price information relates to.	Date	10
2	MKT_OP_CD	Market Operator short code for which the price information history is retrieved.	String	3
1	DTL	Top level hierarchy for header fields.		
2*	PR_INFO_HSTRY_DTL	Top level hierarchy for the individual record elements		

3	UPDT_DT	The calendar date on which the price information was registered	Date	10
3	UPDT_TM	Time when the price information was registered This will be of the format hh:mm	String	5
3	SAP	System Average Price	Float	6,4
3	SMP_BUY	System Marginal Price- Buy	Float	6,4
3	SMP_SELL	System Marginal Price- Sell	Float	6,4

Schema Definition

Name of file: **geminiapipriceinformationhistoryres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="PR_INFO_HSTRY_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="PR_INFO_HSTRY_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="MKT_OP_CD">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:length value="3"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PR_INFO_HSTRY_DTL" minOccurs="0" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="UPDT_DT" type="xs:date"/>
                    <xs:element name="UPDT_TM" type="xs:string"/>
                    <xs:element name="SAP" type="xs:float"/>
                    <xs:element name="SMP_BUY" type="xs:float"/>
                    <xs:element name="SMP_SELL" type="xs:float"/>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.8.4 API Specific Error Messages

None

2.2.9 Register Physical Locational Trades

2.2.9.1 Overview

This API allows the BA (Market Operator) to register physical or locational Trades. This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.9.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/RegisterPhyLocTradesControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapiregisterphyloctradesreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapiregisterphyloctradesres.xsd

2.2.9.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.9.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory

0	REG_PHYS_LOC_TRDS	Top level hierarchy for Register Physical/Locational Trade elements			
1	GAS_DAY	Day for which OCM Trades were registered	Date	10	Yes
1	BTCH_ID	Identification for Transco Physical/Locational Trades	String	8	No
1	RSN_CD	Reason Code describes the Transco's reason for participating in an OCM Trade. This is mandatory only if the batch id is specified	String	4	No
1*	REG_PHYS_LOC_TRDS_DT	Top level hierarchy for individual input records			
2	BID_ID	Identifier for a Bid	String	8	Yes
2	BID_TYPE	Field indicating locational or physical bid The permissible values are: P – Physical L -Locational	String	1	Yes
2	BID_ORGNTOR	Unique identification BA party code	String	10	Yes
2	BID_TMSTMP	Time at which the trade was finalized	DateTime	19	Yes
2	LCN	Meter Id. The Meter Id on which the trade is to be confirmed. This is entered only if the BID_TYPE is 'L'	String	10	No
2	BUY_SELL	OCM trade buy/sell quantity indicator The permissible values are: B- Buy S – Sell	String	1	Yes

2	STRT_TM	The time from when the traded energy will begin to flow. The permissible values are from 0 to 23	Integer	2	Yes
2	TRD_QTY	Quantity bought/sold by the BA (KWh)	Long	13	Yes
2	PRC	The price at which the energy was sold/purchased (p/KWh) This is mandatory only if the batch id is specified	Decimal	6,4	No

Schema Definition

Name of file: **geminiapiregisterphyloctradesreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="REG_PHYS_LOC_TRDS">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="BTCH_ID" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="8"/>
              <xs:whiteSpace value="collapse"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="RSN_CD" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="4"/>
              <xs:whiteSpace value="collapse"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="REG_PHYS_LOC_TRDS_DTL" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="BID_ID">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:minLength value="1"/>
                    <xs:maxLength value="8"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

        <xs:whiteSpace value="collapse"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="BID_TYPE">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="P"/>
        <xs:enumeration value="L"/>
        <xs:whiteSpace value="collapse"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="BID_ORGNTOR">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="10"/>
        <xs:whiteSpace value="collapse"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="BID_TMSTMP">
    <xs:simpleType>
      <xs:restriction base="xs:dateTime"/>
    </xs:simpleType>
  </xs:element>
  <xs:element name="LCN" minOccurs="0">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="10"/>
        <xs:whiteSpace value="collapse"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="BUY_SELL">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="B"/>
        <xs:enumeration value="S"/>
        <xs:whiteSpace value="collapse"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="STRT_TM">
    <xs:simpleType>
      <xs:restriction base="xs:nonNegativeInteger">
        <xs:minInclusive value="0"/>
        <xs:maxInclusive value="23"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="TRD_QTY">
    <xs:simpleType>
      <xs:restriction base="xs:unsignedLong">

```

```

        <xs:totalDigits value="13"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="PRC" minOccurs="0">
    <xs:simpleType>
      <xs:restriction base="xs:decimal">
        <xs:minInclusive value="-99.9999"/>
        <xs:maxInclusive value="99.9999"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.9.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	REG_PHY_LOC_OU	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	GAS_DAY	Day for which OCM Trades were registered	Date	10
1	BTCH_ID	Identification for Transco Physical/Locational Trades	String	8
1	RSN_CD	Reason Code describes the Transco's reason for participating in an OCM Trade. This is mandatory only if the batch id is specified	String	4
1	DTL	Top level hierarchy for Registered Records		
2*	REG_PHY_LOC_DTL	Top level hierarchy for individual elements		
3	BID_ID	Identifier for a Bid	String	8
3	BID_TYPE	Field indicating Locational or Physical Bid The permissible values are: P – Physical L - locational	String	1
3	BID_ORGNTOR	Unique identification code for a Shipper.	String	10
3	BID_TMSTMP	Time at the which the trade was finalized	DateTime	19
3	LCN	Meter ID.	String	10
3	BUY_SELL	OCM Trade buy/sell quantity indicator The permissible values are: B -Buy S – Sell	String	1

3	STRT_TM	The time from when the traded energy will begin to flow The permissible values are from 0 to 23.	String	2
3	TRD_QTY	Quantity bought/sold by the Shipper	Long	13
3	PRC	The price at which the energy was sold/purchased	Decimal	6,4
3	STS	The status of the records The permissible values are: S- Success F- Failure	String	1
3	MSG_CD	This field gives the message code.	String	18
3	MSG_DESC	This field gives a more descriptive information on the status of the physical / locational trade records, i.e. whether all trades have been accepted or only some have been accepted.	String	400

Schema Definition

Name of file: **geminiapiregisterphyloctradesres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="REG_PHY_LOC_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="BTCH_ID" type="xs:string" minOccurs="0"/>
        <xs:element name="RSN_CD" type="xs:string" minOccurs="0"/>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="REG_PHY_LOC_DTL" minOccurs="0" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="BID_ID" type="xs:string"/>
                    <xs:element name="BID_TYPE" type="xs:string"/>
                    <xs:element name="BID_ORGNTOR" type="xs:string"/>
                    <xs:element name="BID_TMSTMP" type="xs:dateTime"/>
                    <xs:element name="LCN" type="xs:string" minOccurs="0"/>
                    <xs:element name="BUY_SELL_IND" type="xs:string"/>
                    <xs:element name="STRT_TM">
                      <xs:simpleType>
                        <xs:restriction base="xs:nonNegativeInteger">
                          <xs:minInclusive value="0"/>
                          <xs:maxInclusive value="23"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                    <xs:element name="TRD_QTY" type="xs:long"/>
                    <xs:element name="PRC" type="xs:decimal" minOccurs="0"/>

```

```

<xs:element name="STS" type="xs:string"/>
<xs:element name="MSG_CD" type="xs:string"/>
<xs:element name="MSG_DESC" type="xs:string"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.9.4 API Specific Error Messages

This API can return the following specific messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section

5.1. Where different APIs return messages with the same code, the meaning will be the same.

The messages below will be reported in the response XML structure for this API in the MSG_CD and MSG_DESC elements, whereas generic error messages, which represent a more fundamental failure, will be reported in the error XML structure. Note that the messages below include the report of successful updates.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Messages

Message Code	Message
GEM_API_ERROR_006	Reason Code cannot be present for a trade if Batch ID is not entered
GEM_API_ERROR_007	Price cannot be present for a trade if Batch ID is not entered
GEM_API_ERROR_007	Reason Code should be present for a trade if Batch ID is entered
GEM_API_ERROR_007	Price should be present for a trade if Batch ID is entered
GEM_API_ERROR_007	Location cannot be present for a trade if Bid Type is Physical
GEM_API_MSG_0074	This OCM trade is accepted
GEM_API_ERROR_007	This OCM trade is rejected

2.2.10 Register Title Swap

2.2.10.1 Overview

This API allows the BA (Market Operator) to upload title swap trades for a gas day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.10.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/RegisterTitleSwapControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapiregistertitleswapreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapiregistertitleswapres.xsd

2.2.10.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.10.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	REG_TTL_SWP_RGSTR	Top level hierarchy for Register Title Swap elements			
1	GAS_DAY	Day when the Price Information was calculated	Date	10	Yes
1*	REG_TTL_SWP	Top level hierarchy for individual input records			
2	PRTY_CD	Party Code of the BA.	String	6	Yes
2	BUY_SELL	OCM Trade buy/sell quantity indicator The permissible values are (Case sensitive): B - Buy S - Sell	String	1	Yes
2	TRD_QTY	Total energy bought/sold by the BA	Long	13	Yes

Schema Definition

Name of file: **geminiapiregistertitleswapreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="REG_TTL_SWP_RGSTR">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:element name="REG_TTL_SWP" minOccurs="0" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="PTY_CD">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="BUY_SELL">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="B"/>
            <xs:enumeration value="S"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TRD_QTY">
        <xs:simpleType>
          <xs:restriction base="xs:unsignedLong">
            <xs:totalDigits value="13"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.10.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	REG_TTL_SWP_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	GAS_DAY	Day for which OCM Trades were registered.	Date	10
1	DTL	Top level hierarchy for Registered Records		
2*	REG_TTL_SWP_DTL	Top level hierarchy for individual elements		
3	PTY_CD	Party Code of the BA.	String	6
3	BUY_SELL	OCM Trade buy/sell quantity indicator The permissible values are: B – Buy S - Sell	String	1
3	TRD_QTY	Total energy bought/sold by the BA	Long	13

3	STS	The status of the records The permissible values are: S - Success F - Failure	String	1
3	MSG_CD	This field gives the message code.	String	18
3	MSG_DESC	This field gives more descriptive information on the status of the title swap records, whether all have been accepted or only some have been accepted.	String	400

Schema Definition

Name of file: **geminiapiregistertitleswapres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="REG_TTL_SWP_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:sequence>
                <xs:element name="REG_TTL_SWP_DTL" minOccurs="0" maxOccurs="unbounded">
                  <xs:complexType>
                    <xs:sequence>
                      <xs:element name="PRTY_CD" type="xs:string"/>
                      <xs:element name="BUY_SELL" type="xs:string"/>
                      <xs:element name="TRD_QTY" type="xs:long"/>
                      <xs:element name="STS" type="xs:string"/>
                      <xs:element name="MSG_CD" type="xs:string"/>
                      <xs:element name="MSG_DESC" type="xs:string"/>
                    </xs:sequence>
                  </xs:complexType>
                </xs:element>
              </xs:sequence>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.10.4 API Specific Error Messages

This API can return the following specific messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section

5.1. Where different APIs return messages with the same code, the meaning will be the same.

The messages below will be reported in the response XML structure for this API in the MSG_CD and MSG_DESC elements, whereas generic error messages, which represent a more fundamental failure, will be reported in the error XML structure. Note that the messages below include the report of successful updates.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Messages

Message Code	Message
GEM_API_MSG_0074	This OCM trade is accepted
GEM_API_ERROR_007	This OCM trade is rejected

2.2.11 Shipper EOD Noms Hour Bar

2.2.11.1 Overview

This API retrieves EOD Nomination details for a BA for a requested gas day. This API retrieves the details of the requested and the scheduled Nominations prevailing at the specified hour bars for the selected gas day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.11.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ViewShipperEODNomsControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapiviewshippereodnomsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapiviewshippereodnomsres.xsd

2.2.11.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.11.3.1 API Request Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	SHPR_EOD_NMS_QR	Top level hierarchy for query elements			
1	GAS_DAY	The gas day for which the details are to be retrieved.	Date	10	Yes

Schema Definition

Name of file: **geminiapiviewshippereodnomsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_EOD_NMS_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.11.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	SHPR_EOD_NMS_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	SHPR_EOD_NMS_QRY	Top level hierarchy for query elements		
2	GAS_DAY	The Gas Flow Day for which the details are to be retrieved.	Date	10
1	DTL	Top level hierarchy for detail		
2*	NRG_DTL	Top level hierarchy for energy detail		

3	HR_BR	The hour bar for which the scheduled nominations and the INS nominations are retrieved. This will be of the format "hh D-n" where hh = Hour bar D = Gas day n = The number of gas days prior to D for which the information was received. For e.g.: If the HR_BR is "17 D- 1", this implies that the value of the EOD nominations data is as of 17:00 hrs on D-1 for gas day D. If the HR_BR is "17 D", this implies that the value of the EOD nominations data is as of 17:00 hrs on D for gas day D, i.e., the "-n" component of this element is omitted.	String	6
3	REQ_NRG	Top level hierarchy for the Requested energy.		
4	REQ_INP_NRG	The requested input energy value at the specified hour bar (kWh)	Long	-
4	REQ_OP_NRG	The requested output energy value at the specified hour bar (kWh)	Long	-
4	NET_REQ_NRG	The difference between the requested input and the requested output energy (kWh)	Long	-
3	SCHD_NRG	Top level hierarchy for the Scheduled energy.		
4	SCHD_INP_NRG	The scheduled input energy value at the specified hour bar (kWh)		-
4	SCHD_OP_NRG	The scheduled output energy value at the specified hour bar (kWh)	Long	-
4	NET_SCHD_NRG	The difference between the scheduled input and the scheduled output energy (kWh)	Long	-

Schema Definition

Name of file: **geminiapiviewshippereodnomsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="ENERGY_VALUE">
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

```

</xs:restriction>
</xs:simpleType>
<xs:element name="SHPR_EOD_NMS_OUT">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="METADATA">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="TMSTMP" type="xs:dateTime"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="SHPR_EOD_NMS_QRY">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="GAS_DAY" type="xs:date"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="DTL">
        <xs:complexType>
          <xs:choice>
            <xs:element name="NRG_DTL" minOccurs="0" maxOccurs="unbounded">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="HR_BR" type="xs:string"/>
                  <xs:element name="REQ_NRG">
                    <xs:complexType>
                      <xs:sequence>
                        <xs:element name="REQ_INP_NRG" type="ENERGY_VALUE"/>
                        <xs:element name="REQ_OP_NRG" type="ENERGY_VALUE"/>
                        <xs:element name="NET_REQ_NRG" type="ENERGY_VALUE"/>
                      </xs:sequence>
                    </xs:complexType>
                  </xs:element>
                  <xs:element name="SCHD_NRG">
                    <xs:complexType>
                      <xs:sequence>
                        <xs:element name="SCHD_INP_NRG" type="ENERGY_VALUE"/>
                        <xs:element name="SCHD_OP_NRG" type="ENERGY_VALUE"/>
                        <xs:element name="NET_SCHD_NRG" type="ENERGY_VALUE"/>
                      </xs:sequence>
                    </xs:complexType>
                  </xs:element>
                </xs:sequence>
              </xs:complexType>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

2.2.11.4 API Specific Error Messages

None

2.2.12 Shipper Total Energy Forecast

2.2.12.1 Overview

Using this API, BAs will be able to retrieve their Total NDMA Forecast values for a Gas Day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.12.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ShipperTotalEnergyForecastControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapishippertotalenergyforecastreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapishippertotalenergyforecastres.xsd

2.2.12.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.12.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	SHPR_TOT_NRG_FCAST_QR	Top level hierarchy for query elements			
1	GAS_DAY	The gas day for which the details are to be retrieved.	Date	10	Yes

Schema Definition

Name of file: **geminiapishippertotalenergyforecastreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_TOT_NRG_FCAST_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.12.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	SHPR_TOT_NRG_FCAST_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	SHPR_TOT_NRG_FCAST_QRY	Top level hierarchy for query elements		
2	GAS_DAY	The gas day for which the details are requested.	Date	10
1	DTL	Top-level hierarchy for details.		
2*	NRG_FCAST_DTL	Top-level hierarchy for Shipper Total Energy Forecast Headers.		
3	CRT_DT	The Date on which the NDMA Nomination values are calculated	Date	10
3	CRT_TM	The time at which the forecast values are calculated. This will be in the format HH:MM:SS	Time	8
3	TOT_FCAST	The shipper's total NDMA forecast across all the LDZs for the selected gas day (kWh)	Long	-

3	CNG_SNCE_LST_NM	The percentage change since the last NDMA forecast. It is an indicator of the percentage change by which the Total NDMA Forecast for a Shipper has changed from the last NDMA Forecast.	Float	7,4
3	NA_RNM_UPDTD	This shows whether the Re-nomination is created for the NDMA meters of the shipper. If the percentage change of the Total NDMA Forecast is greater than or equal to the set percentage value, then this indicator will be set to 'Y'. Else it will be set to 'N'.	String	1

Schema Definition

Name of file: **geminiapishippertotalenergyforecastres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_TOT_NRG_FCAST_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="SHPR_TOT_NRG_FCAST_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:choice>
              <xs:element name="NRG_FCAST_DTL" maxOccurs="1" unbounded="0" _="">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="CRT_DT" type="xs:date"/>
                    <xs:element name="CRT_TM" type="xs:time"/>
                    <xs:element name="TOT_FCAST">
                      <xs:simpleType>
                        <xs:restriction base="xs:long"/>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:choice>
            </xs:complexType>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:schema>
```

```

</xs:simpleType>
</xs:element>
<xs:element name="CNG_SNCE_LST_NM" type="xs:float"/>
<xs:element name="NA_RNM_UPDTD">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Y"/>
      <xs:enumeration value="N"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.12.4 *API Specific Error Messages*

None

2.2.13 *Gas Trades Breakdown*

2.2.13.1 *Overview*

This API retrieves the detailed breakdown of the gas trades for the BA for a requested gas day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.13.2 *API URLs*

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/GasTradesBreakdownControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapigastradesbreakdownreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapigastradesbreakdownres.xsd

2.2.13.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.13.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	GAS_TRD_BRKDN_QR	Top level hierarchy for query elements			
1	GAS_DAY	Day for which Gas Trades where registered.	Date	10	Yes
1	MKT_OP_CD	The market operator for whom the trade breakdown details are retrieved. For example, by specifying the value for this field as 'ENO', the gas trade details are retrieved for the OBO party (ENMO). If this field is omitted then trades with all the trading partners, not just the Market Operator, will be returned.	String	3	No

Schema Definition

Name of file: **geminiapigatradesbreakdownreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="GAS_TRD_BRKDN_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="MKT_OP_CD" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="3"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

2.2.13.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	GAS_TRD_BRKDN_OU	Top level hierarchy for query elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	GAS_TRD_BRKDN_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
2	GAS_DAY	Day for which Gas Trades where registered.	Date	10
2	MKT_OP_CD	The market operator for whom the trade breakdown details are retrieved. For example, by specifying the value for this field as 'ENO', the gas trade details are retrieved for the OBO party (ENMO)	String	3
1	DTL	Top-level hierarchy for Details.		
2	GAS_TRD_DTL	Top-level hierarchy for Gas Trade Details.		
3	TRD_BRKDN_DTL	Top-level hierarchy for Gas Trade Breakdown Details.		
4*	SCHD_NRG_DTL	Top-level hierarchy for Scheduled Energy Details.		
5	TRD_PTNR	The abbreviated name of the BA involved in the trade.	String	12
5	SAP	Indicates whether the trading partner is to be included in SAP	String	1
5	SCHD_NRG_BGT	The approved energy for the buy trade (kWh)	Long	13
5	SHCD_NRG_BUY_STS	The status of the approved buy trade (kWh)	String	1
5	SCHD_NRG_SOLD	The approved Energy for the sell trade (kWh)	Long	13
5	SCHD_NRG_SELL_STS	The status of the approved sell trade.	String	1
5	NET_SCHD_NRG	The difference between the scheduled energy for the buy	Long	13
4	SCHD_NRG_SUMM	Top-level hierarchy for Scheduled Energy Summary.		
5	TOT_SCHD_NRG_BGT	The sum of the approved energies for all the buy trades (kWh)	Long	-
5	TOT_SCHD_NRG_SOLD	The sum of the approved energies for all the sell trades (kWh)	Long	-
5	TOT_SCHD_NRG_NET	The difference between the scheduled energies of the buy and sell trades (kWh)	Long	-

Schema Definition

Name of file: **geminiapigastradesbreakdownres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="ENERGY_VALUE">
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="GAS_TRD_BRKDN_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="GAS_TRD_BRKDN_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="MKT_OP_CD" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:length value="3"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_TRD_DTL" minOccurs="0">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="TRD_BRKDN_DTL">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="SCHD_NRG_DTL" minOccurs="0" maxOccurs="unbounded">
                            <xs:complexType>
                              <xs:sequence>
                                <xs:element name="TRD_PTNR">
                                  <xs:simpleType>
                                    <xs:restriction base="xs:string">
                                      <xs:maxLength value="12"/>
                                    </xs:restriction>
                                  </xs:simpleType>
                                </xs:element>
                                <xs:element name="SAP">
                                  <xs:simpleType>
                                    <xs:restriction base="xs:string">
                                      <xs:maxLength value="1"/>
                                    </xs:restriction>
                                  </xs:simpleType>
                                </xs:element>
                              </xs:sequence>
                            </xs:complexType>
                          </xs:element>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

None

2.2.14 View OCM Re-nomination Details

2.2.14.1 Overview

Physical and Locational Trades conducted by a Market Operator through the On-the- day Commodity Market require confirmation by Shippers within timescales defined by the specified Physical Re-nomination Incentive. This API allows Shipper retrieval of the unconfirmed Physical and/or Locational Trades. Note that although the API name is based on the Gemini screen for maintaining OCM Re-nominations, the API itself implements only ‘view’ functionality (i.e. retrieval of data only).

2.2.14.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API’s functionality:

/gemini/controllers/ConfirmOcmTradesControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapimaintainocmre-nominationreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapimaintainocmre-nominationres.xsd

2.2.14.3 XML Specifications

2.1.14.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	VW_OCM_RN	Top-level hierarchy for view elements.				
1	GAS_DAY	Gas Day	The Gas Day for which OCM Trades are to be retrieved. Information can be requested for only one Gas Day. The date should be in the format YYYY-MM-DD.	Date	10	Y

1	TRD_TYP	Trade Type	This indicates the type of trade for which the data can be retrieved. This can either be Physical, Locational or both types of trades.	String	1	Y
1	BID_ID	Bid Id	The Bid Id field can be blank to retrieve all the bids for that particular day, or a Bid Id may be specified to retrieve details for that particular bid	String	8	N
1	BUY_SELL_IND	Buy/Sell	This indicates if the OCM trade is a buy trade or a sell trade. Permissible values are: A - for both Buy/ Sell B - Buy S - Sell	String	1	Y

Schema Definition

Name of file: **geminiapimaintainocmre-nominationreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_OCM_RNM">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="TRD_TYP">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="A"/>
              <xs:enumeration value="P"/>
              <xs:enumeration value="L"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="BID_ID" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="8"/>
              <xs:minLength value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="BUY_SELL_IND">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="A"/>
              <xs:enumeration value="B"/>
              <xs:enumeration value="S"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

```

</xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.1.14.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	VW_OCM_RNM_DTLS_OUT	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access	DateTime	19
1	VW_OCM_RNM_DTLS_QRY	Top-level hierarchy for query elements.			
2	GAS_DAY	Gas Day	The Gas Day for which OCM Trades are to be retrieved. The Gas date would be of YYYY-MM-DD	Date	10
2	TRD_TYP	Trade Type	This indicates the type of trade for which the data is to be retrieved. This can either be Physical, Locational or both the types of trades. Permissible values are : A - Both the type of trades P - Physical Trade L - Locational Trade	String	1
2	BID_ID	Bid Id	The Bid Id field can be blank to retrieve all the bids for that particular day, or a Bid Id may be specified to retrieve details for that particular bid.	String	8
2	BUY_SELL_IND	Buy/Sell	This indicates if the OCM trade is a buy trade or a sell trade. Permissible values are: A - for both Buy/ Sell B - Buy S - Sell	String	1
1	DTL	Top-level hierarchy for Details.			

2*	OCM_	Top-level hierarchy for Re-nominations.			
3	BID_ID	Bid Id	The Bid Id of the particular trade.	String	8
3	BUY_SELL_IND	Buy/Sell	This indicates if the OCM trade is a buy trade or a sell trade. Possible values are: B - Buy S - Sell	String	1
3	TRD_TYP	Trade Type	This indicates the type of trade Physical or Locational. Possible values are : P - Physical Trade L - Locational Trade	String	1
3	TRD_QTY	Trade Quantity (kWh)	Quantity bought/sold by the Shipper in kWh.	Long	13
3	STR_TIME	Start Time (HH)	Time from when the traded energy will begin to flow. Possible values are between 0 and 23.	Non-Negative Integer	2
3	MTR_ID	Meter Id	Unique identifier for a meter.	String	10
3	I_O_IND	I/O Indicator	Indicates if the meter is an input or an output Meter. Possible values are: I - Input O - Output	String	1
3	OPP_FL	Opposite Flow	Flag to indicate the direction of flow. Possible values are: N - Indicates that it is a normal flow Nomination / Re-nomination Y - Indicates that it is an	String	1
2	TOT	Total	Sum of the total trade quantity displayed in kWh.	Long	-

Schema Definition

Name of file: **geminiapimaintainocmre-nominationres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_OCM_RNM_DTLS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="VW_OCM_RNM_DTLS_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="TRD_TYP">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="A"/>
                    <xs:enumeration value="P"/>
                    <xs:enumeration value="L"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="BID_ID">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="8"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="BUY_SELL_IND">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="A"/>
                    <xs:enumeration value="B"/>
                    <xs:enumeration value="S"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="OCM_RNM_DTL" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="BID_ID">
                      <xs:simpleType>
```

```

    <xs:restriction base="xs:string">
      <xs:maxLength value="8"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="BUY_SELL_IND">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="B"/>
      <xs:enumeration value="S"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="TRD_TYP">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="P"/>
      <xs:enumeration value="L"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="TRD_QTY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="STR_TIME">
  <xs:simpleType>
    <xs:restriction base="xs:nonNegativeInteger">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="23"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MTR_ID" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="I_O_IND" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="I"/>
      <xs:enumeration value="O"/>
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="OPP_FL" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Y"/>

```

```

        <xs:enumeration value="N"/>
        <xs:length value="1"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="TOT" type="xs:long"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.14.4 *API Specific Error Messages*

None

2.2.15 *Maintain Physical Re-nominations Update*

2.2.15.1 *Overview*

Physical and Locational Trades conducted by a Market Operator through the On-the-day Commodity Market require confirmation by BA's within timescales defined by the specified Physical Re-nomination Incentive. This API allows BA's to confirm OCM Physical trades by providing the Location at which the Shipper wishes to renominate. Re-nominations will be created for confirmed trades.

2.2.15.2 *API URLs*

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ UpdatePhysicalRe-nominationsControllerAPI /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapiconfirmphysicalre-nominationreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapiconfirmphysicalre-nominationres.xsd

2.2.15.3 *XML Specifications*

2.2.15.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	UPDT_PHY_RNM	Top-level hierarchy for Update Physical Re-nominations.				
1	GAS_DAY	Gas Day	The Gas Day for which OCM physical trades are to be confirmed. The date should be in YYYY-MM-DD format.	Date	10	Y
1*	UPDT_PHY_RNM_DTL	Top-level hierarchy for Update Physical Re-nominations for Gas Day.				
2	BID_ID	Bid Id	The bid identifier associated with each Bid (unique).	String	8	Y
2	MTR_ID	Meter Id	The Meter Id against which the trade is to be confirmed.	String	10	Y
2	IGNR_TLRNCE	Ignore Tolerance Check?	Flag to indicate whether the tolerance check must be carried out for the record. Permissible values are: Y - Ignore tolerance check N - Perform tolerance check	String	1	Y

Schema Definition

Name of file: **geminiapiconfirmphysicalre-nominationreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_PHY_RNM">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="UPDT_PHY_RNM_DTL" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="BID_ID">

```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="8"/>
    <xs:minLength value="1"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="MTR_ID">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
      <xs:minLength value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="IGNR_TLRNCE">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Y"/>
      <xs:enumeration value="N"/>
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.15.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	UPDT_PHY_RNM_OU	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access	DateTime	19
1	DTL	Top-level hierarchy for Details.			
2	UPDT_PHY_RNM_DTL_QRY	Top-level hierarchy for Physical Re-nominations.			
3	GAS_DAY	Gas Day	The Gas Day for which OCM trades are to be confirmed	Date	10
3*	UPDT_PHY_RNM_DTL	Top-level hierarchy for Physical Re-nominations response for the Gas Day.			

4	BID_ID	Bid Id	The bid identifier associated with each Bid (unique) for which the OCM trades are confirmed.	String	8
4	MTR_ID	Meter Id	The Meter Id against which the trade is confirmed.	String	10
4	IGNR_TLRNCE	Ignore Tolerance Check?	Flag to indicate whether the tolerance check must be carried out for the record. Permissible values are: Y - Ignore tolerance check N - Perform tolerance check	String	1

Schema Definition

Name of file: **geminiapiconfirmphysicalre-nominationres.xsd**

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_PHY_RNM_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="UPDT_PHY_RNM_DTL_QRY">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="GAS_DAY" type="xs:date"/>
                    <xs:element name="UPDT_PHY_RNM_DTL" minOccurs="0" maxOccurs="unbounded">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="BID_ID">
                            <xs:simpleType>
                              <xs:restriction base="xs:string">
                                <xs:maxLength value="8"/>
                              </xs:restriction>
                            </xs:simpleType>
                          </xs:element>
                          <xs:element name="MTR_ID">
                            <xs:simpleType>
                              <xs:restriction base="xs:string">
                                <xs:maxLength value="10"/>
                              </xs:restriction>
                            </xs:simpleType>
                          </xs:element>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:element name="IGNR_TLRNCE">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Y"/>
      <xs:enumeration value="N"/>
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="STS">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="S"/>
      <xs:enumeration value="F"/>
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MSG_CD">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MSG_DESC">
  <xs:simpleType>
    <xs:restriction base="xs:string"/>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.15.4 API Specific Error Messages

None

2.2.16 View Re-nominations

2.2.16.1 Overview

Using this API, the BA will be able to retrieve their input/output Re-nominations for a gas day. The input / output Re-nominations are differentiated based on the service identifier. Re-nominations for Non- Daily-Metered (NDM) meters are excluded, i.e., they are not returned.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

*** COR1154 changes begin ***

UK Link DBI Programme changes the way the Demand Forecast and Allocation is calculated in Gemini and also introduces the Unidentified Gas (UIG). As part of the Demand Forecast calculation if the Daily Metered Nominations are not available, system estimates the Nomination for the purpose of accurate Unidentified Gas calculation. These estimated Nominations are marked with Requested Status 'E'.

This API specification document covers the inclusion of estimated Nominations in the API request and API response.

*** COR1154 changes end ***

2.2.16.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ViewRenominationControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/geminiapiviewrenominationreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/geminiapiviewrenominationres.xsd

2.2.16.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.16.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	VW_RNM_QRY	Top level hierarchy for query elements			

1	GAS_DAY	Gas Day for which Re-nominations are requested	Date	10	Yes
1	SERV_ID	Unique ID associated to a BA's service	String	15	Yes
1	STRT_ACTVTY_NBR	Unique identifier for an activity under a service for a BA.	Integer	6	Yes
1	END_ACTVTY_NBR	Unique identifier for an activity under a service for a BA. If the value input is '0' (zero) for the STRT_ACTVTY_NBR and '999999' for END_ACTVTY_NBR, then the results are fetched for all the activities.	Integer	6	Yes
1	REQ_STS	The status of the entered Nominations/Re-nominations. The permissible values are (Case sensitive): N – Nominated A – Approved R – Rejected E – Estimated If this field is omitted, then the records will be fetched irrespective of the status of the Nomination/Re-nomination.	String	1	No

Schema Definition

Name of file: **geminiapiviewre-nominationreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_RNM_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="SERV_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="15"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="STRT_ACTVTY_NBR">
          <xs:simpleType>
            <xs:restriction base="xs:nonNegativeInteger">
              <xs:totalDigits value="6"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="END_ACTVTY_NBR">
```

```

<xs:simpleType>
  <xs:restriction base="xs:nonNegativeInteger">
    <xs:totalDigits value="6"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="REQ_STS" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="A"/>
      <xs:enumeration value="N"/>
      <xs:enumeration value="R"/>
      <xs:enumeration value="E"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.16.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	VW_RNM_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	VW_RNM_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
2	GAS_DAY	Gas Day for which Re-nominations are requested	Date	10
2	SERV_ID	Unique ID associated to a BA's service	String	15
2	STRT_ACTVTY_NBR	Unique identifier for an activity under a service for a BA.	Integer	6
2	END_ACTVTY_NBR	Unique identifier for an activity under a service for a BA.	Integer	6

2	REQ_STS	The status of the entered Nominations/Re-nominations The permissible values are: N – Nominated A – Approved R – Rejected E – Estimated If this field is omitted, then the records will be fetched irrespective of the status of the Nomination/Re-nomination.	String	1
1	DTL	Top-level hierarchy for Details.		
2	RNM_DTL	Top-level hierarchy for Re-nominations Details.		
3*	RNM_DTL_INF	The detail record for Re-nomination		
4	ACTVTY_NBR	Unique identifier for an activity under a service for a BA.	Integer	6
4	SF	Special Function indicates the type of Re-nomination. AF - Accepted Flex bid OC – OCM Re-nomination Spaces(‘ ’) – Normal Re-nomination.	String	2
4	METER_ID	The meter on which the Re-nomination is created	String	10
4	STRT_TM	The start time of the latest Re-nomination step for an activity. This will be of the format hh	Integer	2
4	REQ_NRG	Quantity of energy requested for the gas day for the service/activity (kWh).	Long	13
4	REQ_STS	The status of the entered Re-nomination. The permissible values are: N - Nominated. A - Approved. R - Rejected. E – Estimated.	String	1
4	SCHD_NRG	Quantity of energy approved by O&T User for the Gas Day for the Service/Activity (kWh) If the Nomination / Re-nomination is unapproved, the value will be ‘NULL’	Long	13

4	SCHD_STS	The scheduled status of the entered Nominations/Re-nominations. The permissible values are: A - The Nomination / Re-nomination has been approved Blank space(NULL)- The Nomination / Re-nomination is unapproved	String	1
4	NO_OF_STPS	The number of Re-nomination Steps	Integer	2
4	OPP_FL	Flag to indicate the direction of flow The permissible values are: N - Indicates that it is a normal flow Nomination / Re-nomination Y - Indicates that it is an opposite flow Nomination / Re-nomination	String	1
4	FRST_NM	Flag to indicate whether the record is a Nomination, Re-nomination or a first Nomination. The permissible values are: N - This indicates that a Nomination was created for this Activity in the Nomination Window. R - This indicates that a Renomination was created for this Activity in the Renomination window. F – This is displayed when a Renomination is created on an activity for the first time in the Renomination window, i.e. an Activity for which a prior Nomination does not exist.	String	1
3	ENRGY_TOTLS	Top-level hierarchy for Energy Totals.		
4	REQ_NRG_TOT	This is the sum of all the Requested Energy for the specified Gas Day (kWh).	Long	
5	SCHD_NRG_TOT	This is the sum of all the Scheduled Energy for the specified Gas Day (kWh).	Long	
6	NO_OF_ACTVTS	The total number of activites fetched	Integer	6

Schema Definition

Name of file: **geminiapiviewre-nominationres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_RNM_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="VW_RNM_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="SERVC_ID">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="15"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="STRT_ACTVTY_NBR">
                <xs:simpleType>
                  <xs:restriction base="xs:nonNegativeInteger">
                    <xs:totalDigits value="6"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="END_ACTVTY_NBR">
                <xs:simpleType>
                  <xs:restriction base="xs:nonNegativeInteger">
                    <xs:totalDigits value="6"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="REQ_STS" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="A"/>
                    <xs:enumeration value="N"/>
                    <xs:enumeration value="R"/>
                    <xs:enumeration value="E"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:choice>
              <xs:element name="RNM_DTL">
                <xs:complexType>

```

```

<xs:sequence>
  <xs:element name="RNM_DTL_INF" maxOccurs="unbounded">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="ACTVTY_NBR">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="6"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="SF">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="AF"/>
              <xs:enumeration value="OC"/>
              <xs:enumeration value=""/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="METER_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="STRT_TM" type="xs:nonNegativeInteger"/>
        <xs:element name="REQ_NRG">
          <xs:simpleType>
            <xs:restriction base="xs:long">
              <xs:totalDigits value="13"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="REQ_STS">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="SCHD_NRG" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:long"/>
          </xs:simpleType>
        </xs:element>
        <xs:element name="SCHD_STS" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="NO_OF_STPS">
          <xs:simpleType>

```

```

        <xs:restriction base="xs:int"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="OPP_FL">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="FRST_NM">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="ENRGY_TOTLS">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="REQ_NRG_TOT">
        <xs:simpleType>
          <xs:restriction base="xs:long"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="SCHD_NRG_TOT">
        <xs:simpleType>
          <xs:restriction base="xs:long"/>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="NO_OF_ACTVTS">
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:totalDigits value="6"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.16.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Error Code	Error Message
GEM_API_ERROR_0050	Start Activity Number can't be greater than End Activity number
GEM_API_ERROR_0051	Invalid Service Id for the BA

2.2.17 Update INS Nominations

2.2.17.1 Overview

Using this API, a BA can add INS Nominations for a set of gas days. The BA can also use this API to modify the existing INS Nominations.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.17.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ UpdateINSNominationsControllerAPI /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapiupdateinsnominationsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapiupdateinsnominationsres.xsd

2.2.17.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.17.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	UPDT_INS_NMS	Top level hierarchy for update elements			
1*	UPDT_INS_NMS_DTL	Top level hierarchy for update detail elements			
2	GAS_DAY	Gas day for which the INS Nominations are to be updated.	Date	10	Yes
2	PROJ_EOD_IMBAL	This is a positive or negative value, which indicates the intended end of the day imbalance (or INS Nomination) in kWh	Long	13	Yes
2	RSN	This field is used for entering the reason (if any) for modifying an existing INS Nomination However, if a reason is provided for a new INS Nomination record, the field will be ignored and will not be updated into the system for the new record. If the field is omitted during modification, then the system will insert a default reason - 'Record modified'	String	255	No

Schema Definition

Name of file: **geminiapiupdateinsnominationsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_INS_NMS">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="UPDT_INS_NMS_DTLS" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="PROJ_EOD_IMBAL">
                <xs:simpleType>
                  <xs:restriction base="xs:long">
                    <xs:totalDigits value="13"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="RSN" minOccurs="0">
```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:whiteSpace value="replace"/>
    <xs:minLength value="1"/>
    <xs:maxLength value="255"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.17.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length
0	UPDT_INS_NMS_OUT	Top level hierarchy for update elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1*	UPDT_INS_NMS_DTL	Top level hierarchy for detail information elements		
2	GAS_DAY	Gas Day for which the INS Nominations are to be updated.	Date	10
2	PROJ_EOD_IMBAL	This is a positive or negative value, which indicates the intended End Of Day Imbalance (or INS Nomination) in kWh provided by the BA or as applied by the system. Positive value of INS Nomination will indicate that the BA intends to over deliver gas. Negative value will indicate an under delivery of gas.	Long	13
2	RSN	This field is used for providing the reason (if any) for modifying an existing INS Nomination	String	255
2	STS	The status of the records The permissible values are: S - Success F - Failure	String	1
2	MSG_CD	This field provides a unique message code	String	18

2	MSG_DESC	This field gives the description for the message code specified. If a record is successful it indicates the same. In case if a record has failed, it gives the reason for failure of the record.	String	400
---	----------	--	--------	-----

Schema Definition

Name of file: **geminiapiupdateinsnominationsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_INS_NMS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="UPDT_INS_NMS_DTLS" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
              <xs:element name="PROJ_EOD_IMBAL" type="xs:long"/>
              <xs:element name="RSN" type="xs:string"/>
              <xs:element name="STS" type="xs:string"/>
              <xs:element name="MSG_CD" type="xs:string"/>
              <xs:element name="MSG_DESC" type="xs:string"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.17.4 API Specific Error Messages

This API can return the following specific messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

The messages below will be reported in the response XML structure for this API in the MSG_CD and MSG_DESC elements, whereas generic error messages, which represent a more fundamental failure, will be reported in the error XML structure. Note that the messages below include the report of successful updates.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Messages

Message Code	Message
GEM_API_ERROR_0077	The INS Nomination for this gas day is already being updated
GEM_API_ERROR_0078	INS Nomination creation time elapsed
GEM_API_ERROR_0079	The Gas Day not within Current Nomination period
GEM_API_ERROR_0080	The record is being modified by another user
GEM_API_MSG_0081	This record has been successfully added
GEM_API_MSG_0082	This record has been successfully modified

2.2.18 Update Re-nominations

2.2.18.1 Overview

Using this API, BA will be able to update input/output re-nominations for a Gas Day and a Service Id. The input / output re-nominations are differentiated based on the service identifier.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.18.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ UpdateRe-nominationsControllerAPI /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapiupdatere-nominationsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapiupdatere-nominationsres.xsd

2.2.18.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.18.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	UPDT_RNM	Top level hierarchy for the Update Re-nominations			

1	GAS_DAY	Gas Day for which re-nominations are updated	Date	10	Yes
1	SERV_ID	Unique ID associated to a BA's service	String	15	Yes
1*	UPDT_RNM_DT	Top level hierarchy for the details of update Re-nominations			
2	ACTVTY_NBR	Unique number within a Service which defines the flow of gas through a meter	Integer	6	Yes
2	STRT_TM	Start time of the Re-nomination step. The Start Time should be in the range 0 to 23.	Integer	2	Yes
2	REQ_NRG	Quantity of energy requested for the Gas Day for the Service/Activity (kWh)	Long	13	Yes
2	IGNR_TLRNCE	A flag to indicate whether the tolerance check must be carried out for the record or whether it should be ignored. The permissible values are (Case sensitive): Y - To ignore the tolerance check. N - To carry out the tolerance check.	String	1	Yes

Schema Definition

Name of file: **geminiapiupdatere-nominationsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_RNM">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="SERV_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:whiteSpace value="replace"/>
              <xs:minLength value="1"/>
              <xs:maxLength value="15"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="UPDT_RNM_DTL" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="ACTVTY_NBR">
                <xs:simpleType>
                  <xs:restriction base="xs:nonNegativeInteger">
                    <xs:totalDigits value="6"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="STRT_TM">
```

```

<xs:simpleType>
  <xs:restriction base="xs:nonNegativeInteger">
    <xs:minInclusive value="0"/>
    <xs:maxInclusive value="23"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="REQ_NRG">
  <xs:simpleType>
    <xs:restriction base="xs:unsignedLong">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="IGNR_TLRNCE">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:whiteSpace value="collapse"/>
      <xs:enumeration value="Y"/>
      <xs:enumeration value="N"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.18.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length
0	UPDT_RNM_OU	Top level hierarchy for update elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	GAS_DAY	Gas Day for which re-nominations are updated	Date	10
1	SERV_ID	Unique ID associated to a BA's service	String	15
1*	ACTVTY	Top level hierarchy for activity elements		
2	ACTVTY_NBR	Unique number within a service which defines the flow of gas through a meter	Integer	6
2*	STEP	Top level hierarchy for step elements		
3	STRT_TM	Start time within a gas day. The Start Time is of 2 characters. Range 0 to 23.	Integer	2
3	REQ_NRG	Quantity of energy requested for the Gas Day for the Service/Activity	Long	13

3	STS	The status of the records The permissible values are: S - Success F – Failure	String	1
3	MSG_CD	This field gives the message code.	String	18
3	MSG_DESC	This field gives more descriptive information on the status of the record. If a record is successful it indicates the same. In case if a record has failed, it gives the reason for failure of the record.	String	400

Schema Definition

Name of file: **geminiapiupdatere-nominationsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_RNM_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="SERVC_ID" type="xs:string"/>
        <xs:element name="ACTVTY" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="ACTVTY_NBR" type="xs:nonNegativeInteger"/>
              <xs:element name="STEP" minOccurs="0" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="STRT_TM" type="xs:nonNegativeInteger"/>
                    <xs:element name="REQ_NRG" type="xs:long"/>
                    <xs:element name="STS" type="xs:string"/>
                    <xs:element name="MSG_CD" type="xs:string"/>
                    <xs:element name="MSG_DESC" type="xs:string"/>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.18.4 *API Specific Error Messages*

None

2.2.19 *View WCF SF Values*

2.2.19.1 *Overview*

This API retrieves Weather Correction Factor (WCF) and the Scaling Factor (SF) Values (both Forecast and Allocated) for each LDZ for the gas day requested.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

*** COR1154 changes begin ***

UK Link DBI Programme changes the way the Demand Forecast and Allocation is calculated in Gemini. Scaling Factor will no longer be calculated as part of Demand Forecast and Demand Allocation process. The fields containing the Scaling Factor will return as empty field if the request is made for the Gas Day after the UK Link DBI implementation date.

This API specification document covers the changes to the Scaling Factor described above.

*** COR1154 changes end ***

2.2.19.2 *API URLs*

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ ViewWCFSFValuesControllerAPI /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapiviewwcfsfvaluesreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapiviewwcfsfvaluesres.xsd

2.2.19.3 *XML Specifications*

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.19.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	VW_WCF_SF_VAL_QR	Top level hierarchy for View WCF/SCF Values elements			
1	GAS_DAY	The Gas Flow Day for which the details are to be	Date	10	Yes
1	LDZ	The two character LDZ code. If omitted then data for all LDZs is retrieved.	String	2	No

Schema Definition

Name of file: **geminiapiviewwcfvaluesreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_WCF_SF_VAL_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="LDZ" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="2"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

2.2.19.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	VW_WCF_SF_VAL_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	VW_WCF_SF_VAL_QRY	Top level hierarchy for query elements		
2	GAS_DAY	The Gas Flow Day for which the details are to be retrieved.	Date	10

2	LDZ	The two character LDZ code. If LDZ is left blank then all the records are retrieved.	String	2
1	DTL		Top level	
2*	WCF_SF_DTL		Top level	
3	LDZ	This field gives the combination of the two character LDZ code along with the LDZ name. This field will be of the format 'LDZ Id – LDZ name' For eg: 'EA – EASTERN LDZ' The first two characters is the two character LDZ code i.e EA. This is followed by the LDZ name (maximum of 200 characters) starting from the 6th character i.e EASTERN LDZ.	String	205
3	ALLCTD_FCAST	Indicates whether the retrieved WCF/SF is an allocation or a forecast value. A - indicates allocated values F - indicates forecast values	String	1
3	WCF	The Weather Correction Factor for the LDZ.	Float	8,4
3	SCLNG_FCTR	The scaling factor for the LDZ. This field will return no value if the Gas Day requested is after the UK Link DBI Implementation date.	Float	14,10
3	CRT_DT	The Date on which the WCF and SF values are calculated.	Date	10
3	CRT_TM	The time at which the WCF and SF values are calculated	String	5

Schema Definition

Name of file: **geminiapiviewwcfssfvaluesres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="VW_WCF_SF_VAL_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="VW_WCF_SF_VAL_QRY">
          <xs:complexType>

```

```
<xs:sequence>
  <xs:element name="GAS_DAY" type="xs:date"/>
  <xs:element name="LDZ" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="WCF_SF_DTL" minOccurs="0" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="LDZ" type="xs:string"/>
            <xs:element name="ALLCTD_FCAST" type="xs:string"/>
            <xs:element name="WCF" type="xs:float"/>
            <xs:element name="SCLNG_FCTR" type="xs:float"/>
            <xs:element name="CRT_DT" type="xs:date"/>
            <xs:element name="CRT_TM" type="xs:string"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>
```

2.2.19.4 API Specific Error Messages

None

2.2.20 Add or Update Nominations

2.2.20.1 Overview

This API is used to create or update nominations for Entry and Exit Meters. Unlike Gemini screens where Nominations may be entered for a range of Gas Days, this API will permit Nominations only for a single Gas Day at a time for a given Service Id. (Input / Output Nominations are differentiated by Service Id.)

2.2.20.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

[/gemini/controllers/ UpdateNominationsControllerAPI /](#)

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

[/gemini/api/schema/](#) [geminiapiupdatenominationsreq.xsd](#)

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapiupdatenominationsres.xsd>

2.2.20.3 XML Specifications

2.2.20.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
10	UPDT_NM	Top-level hierarchy for Update Nominations.				
1	GAS_DAY	Gas Day	The Gas Day for which nominations are to be created / updated. The date should be in YYYY-MM-DD format.	Date	10	Y
1	SERV_ID	Service Id	Unique ID associated to a BA's	String	15	Y
1*	UPDT_NM_IN_DT	Top-level hierarchy for Update Nominations for Gas Day.				
2	ACTVTY_NBR	Activity Number	Unique number within a Service that defines the flow of gas through a meter.	Integer	6	Y
2	REQ_NRG	Requested Energy	Quantity of energy requested for the Gas Day for the Service / Activity in kWh.	Long	13	Y
2	IGNR_TLRNCE	Ignore Tol Check	Flag to indicate whether the tolerance check must be carried out for the record. Permissible values are: Y - Ignore tolerance check N - Perform tolerance check	String	1	Y

Schema Definition

Name of file: **geminiapiupdatenominationsreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_NM">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="SERVC_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="15"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="UPDT_NM_IN_DTL" minOccurs="0" maxOccurs="unbounded">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="ACTVTY_NBR">
          <xs:simpleType>
            <xs:restriction base="xs:nonNegativeInteger">
              <xs:totalDigits value="6"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="REQ_NRG">
          <xs:simpleType>
            <xs:restriction base="xs:unsignedLong">
              <xs:totalDigits value="13"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="IGNR_TLRNCE">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Y"/>
              <xs:enumeration value="N"/>
              <xs:length value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

2.2.20.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	UPDT_NM_OU	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Time stamp of API access	DateTime	19
1	DTL	Top-level hierarchy for Details			
2	GAS_DAY	Gas Day	The Gas Day for which nominations are to be created. The date should be in YYYY-MM-DD format.	Date	10
2	SERV_ID	Service Id	Unique ID associated to a BA's service.	String	15
2*	UPDT_NM_INF	Top-level hierarchy for Physical Re-nominations			
3	ACTVTY_NBR	Activity Number	Unique number within a Service that defines the flow of gas through a meter.	Integer	6
3	REQ_NRG	Requested Energy	Quantity of energy requested for the Gas Day for the Service / Activity in kWh.	Long	13
3	STS		The status of the records Expected values are: S - Success F - Failure	String	1
3	MSG_CD		This field gives the corresponding message code, in the case of success as well as failure.	String	18
3	MSG_DESC		This field provides further descriptive information on the status of the record. Indicates if record is successful or has failed. In case of failure, a reason is provided.	String	

Schema Definition

Name of file: **geminiapiupdatenominationsres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_NM_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>

```

```

<xs:sequence>
  <xs:element name="TMSTMP" type="xs:dateTime"/>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="GAS_DAY" type="xs:date"/>
      <xs:element name="SERVC_ID">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="15"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="UPDT_NM_INF" minOccurs="0" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="ACTVTY_NBR">
              <xs:simpleType>
                <xs:restriction base="xs:nonNegativeInteger">
                  <xs:totalDigits value="6"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="REQ_NRG">
              <xs:simpleType>
                <xs:restriction base="xs:long">
                  <xs:totalDigits value="13"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="STS">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value="S"/>
                  <xs:enumeration value="F"/>
                  <xs:length value="1"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="MSG_CD">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="18"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="MSG_DESC">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>

```

```

</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.20.4 API Specific Error Messages

This API can return the following specific messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

The messages below will be reported in the response XML structure for this API in the MSG_CD and MSG_DESC elements, whereas generic error messages, which represent a more fundamental failure, will be reported in the error XML structure. Note that the messages below include the report of successful updates.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Messages

Message Code	Message
GEM_API_ERROR_0051	Invalid Service Id for the BA.
GEM_API_ERROR_0316	Gas Day is not within the nomination window.
GEM_API_ERROR_0057	Invalid Activity for entered Contract.
GEM_API_ERROR_0058	Cannot create Nomination for NDMA meters.
GEM_API_ERROR_0059	The meter on this Activity is inactive.
GEM_API_ERROR_0060	Opposite flow nomination cannot be added.
GEM_API_ERROR_0317	Tolerance validation has failed for this Activity.
GEM_API_MSG_0318	Nomination Added/Updated Successfully.
GEM_API_ERROR_0056	Nomination for the Activity Number-Special Function Combination already exists.
GEM_API_ERROR_0084	The data you require is currently locked by another user.

2.2.21 Update Multilocal Trade

2.2.21.1 Overview

Physical and Locational Trades conducted by a Market Operator through the On-the-day Commodity Market require confirmation by BAs within timescales defined by the specified Physical Re-nomination Incentive. This API allows BAs to confirm OCM trades against multiple locations by providing the Locations (Meter Ids) at which the BA wishes to renominate. Re-nominations will be created for the confirmed trades.

2.2.21.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

[/gemini/controllers/ UpdateMultiLocationalOCMTradesControllerAPI /](#)

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

[/gemini/api/schema/ geminiapiconfirmmultilocaltraderreq.xsd](#)

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

[/gemini/api/schema/ geminiapiconfirmmultilocaltraderres.xsd](#)

2.2.21.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.21.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	UPDT_NM	Top-level hierarchy for Update Nominations.				
1	GAS_DAY	Gas Day	The Gas Day for which nominations are to be created / updated. The date should be in YYYY-MM-DD format.	Date	10	Y
1	SERV_ID	Service Id	Unique ID associated to a BA's service.	String	15	Y
1*	UPDT_NM_IN_DT	Top-level hierarchy for Update Nominations for Gas Day.				
2	ACTVTY_NBR	Activity Number	Unique number within a Service that defines the flow of gas through a meter.	Integer	6	Y
2	REQ_NRG	Requested Energy	Quantity of energy requested for the Gas Day for the Service / Activity in kWh.	Long	13	Y

2	IGNR_TLRNCE	Ignore Tol Check	Flag to indicate whether the tolerance check must be carried out for the record. Permissible values are: Y - Ignore tolerance check N - Perform tolerance check	String	1	Y
---	-------------	------------------	---	--------	---	---

Schema Definition

Name of file: **geminiapiconfirmmultilocaltraderreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_MUL_RNM">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
        <xs:element name="BID_ID">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="8"/>
              <xs:minLength value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="UPDT_MUL_RNM_DTL" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="MTR_ID">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                    <xs:minLength value="1"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="RNM_QTY">
                <xs:simpleType>
                  <xs:restriction base="xs:long">
                    <xs:totalDigits value="13"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="IGNR_TLRNCE">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="Y"/>
                    <xs:enumeration value="N"/>
                    <xs:length value="1"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

```

</xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.21.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	UPDT_MUL_RNM_O	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Time stamp of API access	DateTime	19
1	DTL	Top-level hierarchy for Details.			
2	UPDT_MUL_RNM_IN	Top-level hierarchy for Physical Re-nominations.			
3	GAS_DAY	Gas Day	The gas day for which OCM trades are to be confirmed.	Date	10
3	BID_ID	Bid Id	The bid identifier associated with each bid (unique).	String	8
3*	UPDT_MUL_RNM_DTL	Top-level hierarchy for Physical Re-nominations response for the Gas Day.			
4	MTR_ID	Meter Id	The meter Id against which the trade is confirmed.	String	10
4	RNM_QTY	Renomination Qty (kWh)	Quantity of energy to be renominated in KWh.	Long	13

Schema Definition

Name of file: **geminiapiconfirmmultilocaltraderes.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="UPDT_MUL_RNM_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">

```

```

<xs:complexType>
  <xs:sequence>
    <xs:element name="TMSTMP" type="xs:dateTime"/>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="UPDT_MUL_RNM_INF">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="GAS_DAY" type="xs:date"/>
            <xs:element name="BID_ID">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="8"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="UPDT_MUL_RNM_DTL" minOccurs="0"
maxOccurs="unbounded">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="MTR_ID">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:maxLength value="10"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="RNM_QTY">
                    <xs:simpleType>
                      <xs:restriction base="xs:long">
                        <xs:totalDigits value="13"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="IGNR_TLRNCE">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:enumeration value="Y"/>
                        <xs:enumeration value="N"/>
                        <xs:length value="1"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="STS">
                    <xs:simpleType>
                      <xs:restriction base="xs:string">
                        <xs:enumeration value="S"/>
                        <xs:enumeration value="F"/>
                        <xs:length value="1"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:element name="MSG_CD">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MSG_DESC">
  <xs:simpleType>
    <xs:restriction base="xs:string"/>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.21.4 API Specific Error Messages

This API can return the following specific messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

The messages below will be reported in the response XML structure for this API in the MSG_CD and MSG_DESC elements, whereas generic error messages, which represent a more fundamental failure, will be reported in the error XML structure. Note that the messages below include the report of successful updates.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Messages

Message Code	Message
GEM_API_ERROR_0300	Invalid Bid Id for the BA.
GEM_API_ERROR_0302	Current time is before the beginning Re-nominations deadline.
GEM_API_ERROR_0303	Current time is after the ending Re-nominations deadline.
GEM_API_ERROR_0304	Production Date has expired.
GEM_API_MSG_0305	Re-nomination committed successfully.
GEM_API_ERROR_0306	Meter is not active on Gemini system.
GEM_API_ERROR_0307	Location should be ST, DC, OS, SE, XI and XF.
GEM_API_ERROR_0308	Shipper is not a registered user for the meter.
GEM_API_ERROR_0309	A negative implied flow rate validation has occurred.
GEM_API_MSG_0310	Re-nomination committed with PRI charges.

GEM_API_ERROR_0311	Tolerance value has been exceeded while confirming the trade.
GEM_API_ERROR_0312	Total quantity should match Trade Quantity.
GEM_API_ERROR_0313	Duplicate meter runs are not allowed.
GEM_API_ERROR_0315	Service is not available for the shipper
GEM_API_MSG_0319	This record is valid, but cannot be committed due to failure of one or more of the other records.

2.2.22 Daily Cash Out Tolerance Breakdown

2.2.22.1 Overview

This API allows the BA to retrieve the cashout tolerance breakdown details for a given gas day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.22.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

[/gemini/controllers/ DailyCashoutBreakDownControllerAPI /](#)

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

[/gemini/api/schema/ geminiapidailycashoutbreakdownreq.xsd](#)

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

[/gemini/api/schema/ geminiapidailycashoutbreakdownres.xsd](#)

2.2.22.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.22.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	CSHOUT_BRKDN_QRY	Top level hierarchy for query elements			

1	GAS_DAY	Day for which the cashout tolerance breakdown details are retrieved.	Date	10	Yes
---	---------	--	------	----	-----

Schema Definition

Name of file: **geminiapidailycashoutbreakdownreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="CSHOUT_BRKDN_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.22.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	CSHOUT_BRKDN_OUT	Top level hierarchy for query elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	CSHOUT_BRKDN_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
2	GAS_DAY	Day for which the cashout tolerance breakdown details are retrieved.	Date	10
1	DTL	Top-level hierarchy for details.		
2	CSHOUT_BRKDN_DTL	Top-level hierarchy for cashout breakdown details.		
3	HDR_DTL	Top-level hierarchy for the Header Details.		
4	CSHOUT_TLRNCE	The BA's cashout tolerance quantity	Long	13
4	FCAST_DEVTN	The BA's forecast deviation for a gas day	Long	13
4	NDMA_OP_RNM_FCAST	The NDMA output re-nomination forecast for the BA, for the gas day	Long	13
4	DEEMED_ALLOC_NDMA_LOAD	The deemed allocated NDMA Load Quantity for the Shipper, for the Gas Day	Long	13
3*	DLY_CSHOUT_BRKDN_DTL	Top-level hierarchy for Daily Cashout Tolerance Breakdown Details.		

4	METER_TYPE	Specifies the type of meter	String	2
4	DMC_TYPE	The sub type for a meter. This is applicable only for DC meters. The permissible values are S - Small N -Normal L - Large	String	1
4	PCTG	The tolerance percentage set for each meter type.	Float	6,3
4	TOT_MSMT_ALLOC	The total allocated/measured quantity for the meter Type	Long	13
4	TLRNCE_QTY	The tolerance quantity for the meter type	Float	16,3

Schema Definition

Name of file: **geminiapidailycashoutbreakdownres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="ENERGY_VALUE">
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="CSHOUT_BRKDN_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="CSHOUT_BRKDN_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="CSHOUT_BRKDN_DTL">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="HDR_DTL" minOccurs="0">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="CSHOUT_TLRNCE" type="ENERGY_VALUE"/>
                          <xs:element name="FCAST_DEVTN" type="ENERGY_VALUE"/>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```



```

        <xs:element name="NDMA_OP_RNM_FCAST" type="ENERGY_VALUE"/>
        <xs:element name="DEEMED_ALLOC_NDMA_LOAD" type="ENERGY_VALUE"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DLY_CSHOUT_BRKDN_DTL" minOccurs="0"
maxOccurs="unbounded">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="METER_TYPE">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:maxLength value="2"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="DMC_TYPE">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:maxLength value="1"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="PCTG" type="xs:float"/>
            <xs:element name="TOT_MSMT_ALLOC" type="ENERGY_VALUE"/>
            <xs:element name="TLRNCE_QTY" type="xs:float"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.22.4 API Specific Error Messages

None

2.2.23 System Status Information

2.2.23.1 Overview

This API allows the BA to view the System Status information for the current System Date.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.23.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

</gemini/controllers/SystemStatusInfoControllerAPI/>

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

NA

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapisystemstatusinfores.xsd>

2.2.23.3 XML Specifications

2.2.23.3.1 API Request

Element Table

None

Schema Definition

None

2.2.23.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	STS_OUT	Top level hierarchy for output elements		

1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	DTL	Top level hierarchy for detail.		
2	SYS_STS_INFO	Top level hierarchy for the record elements		
3	UPDT_TIME	The latest time when the System Status details were updated. This will be of the format hh:mm:ss	Time	8
3	CLNDR_DAY	The current Calendar Day	Date	10
3	CURR_DMND	The current forecast for the EOD demand (mcm)	Float	4,1
3	OPN_LNPK	The linepack at the start of the Calendar day (mcm)	Float	4,1
3	PCLP1	Projected Closing Line pack 1 (mcm)	Float	4,1
3	PCLP2	Projected Closing Line pack 2 (mcm)	Float	4,1
3	SAP	System Average Price (p/kWh)	Float	6,4
3	SMP_BUY	System Marginal Price Buy (p/kWh)	Float	6,4
3	SMP_SELL	System Marginal Price Sell (p/kWh)	Float	6,4
3	DAY_AHEAD_DMND	The day ahead demand data as entered by National Grid NTS user (mcm)	Float	5,1
3	LNPK_CMNT	Additional details related to the Status Information	String	400

Schema Definition

Name of file: **geminiapisystemstatusinfores.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="STS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element name="TMSTMP" type="xs:dateTime"/>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:choice>
      <xs:element name="SYS_STS_INFO">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="UPDT_TIME" type="xs:time"/>
            <xs:element name="CLNDR_DAY" type="xs:date"/>
            <xs:element name="CURR_DMND" type="xs:float"/>
            <xs:element name="OPN_LNPK" type="xs:float"/>
            <xs:element name="PCLP1" type="xs:float"/>
            <xs:element name="PCLP2" type="xs:float"/>
            <xs:element name="SAP" type="xs:float" minOccurs="0"/>
            <xs:element name="SMP_BUY" type="xs:float" minOccurs="0"/>
            <xs:element name="SMP_SELL" type="xs:float" minOccurs="0"/>
            <xs:element name="DAY_AHEAD_DMND" type="xs:float"/>
            <xs:element name="LNPK_CMNT">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="400"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:choice>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.23.4 API Specific Error Messages

None

2.2.24 System Status History

2.2.24.1 Overview

This API retrieves the System Status History for a calendar day.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.24.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

[/gemini/controllers/ SystemStatusHistoryControllerAPI /](#)

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

[/gemini/api/schema/ geminiapisystemstatshistoryreq.xsd](#)

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

[/gemini/api/schema/ geminiapisystemstatshistoryres.xsd](#)

2.2.24.3 XML Specifications

An asterisk in the 'Hierarchy' column of the API Request and Response element tables denotes an element or group that may occur multiple times.

2.2.24.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	NM_SYS_HSTRY_QRY	Top level hierarchy for query			
1	CLNDR_DAY	The calendar day for which the system status history details are being queried.	Date	10	Yes

Schema Definition

Name of file: **geminiapisystemstatshistoryreq.xsd**

```
<?xml version="1.0"?>
```

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"="">
  <xs:element name="NM_SYS_HSTRY_QRY" <xs:complexType="
    <xs:sequence>
      <xs:element name="CLNDR_DAY" type="xs:date"/>
    </xs:sequence>
  </xs:element>
</xs:schema>
```

2.2.24.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	NM_SYS_HSTRY_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19
1	NM_SYS_HSTRY_QRY	Top level hierarchy for query elements		
2	CLNDR_DAY	The calendar day for which the system status history details are being queried.	Date	10
1	DTL	Top level hierarchy for header fields.		
2*	SYS_STATS_HSTRY_DTL	Top level hierarchy for the Individual record elements		
3	UPDT_TM	The time at which the Line pack details were received from the source system This will be of the format hh:mm	String	5
3	CURR_DMND	The current forecast for the EOD demand (mcm)	Float	4,1
3	OPN_LNPK	The linepack at the start of the Calendar Day (mcm)	Float	4,1
3	PCLP1	The Projected Closing Line pack based on DFN information received from Delivery Facility Operators (DFOs') (mcm)	Float	4,1
3	PCLP2	The Projected Closing Line pack based on aggregate BA INS nominations (mcm)	Float	4,1
3	SAP	The system average price (p/kWh)	Float	6,4
3	SMP_BUY	The system marginal price- buy (p/kWh)	Float	6,4
3	SMP_SELL	The system marginal price- sell (p/kWh)	Float	6,4
3	DAY_AHEAD_DMND	The day ahead demand data as entered by National Grid NTS user (mcm)	Float	5,1

3	LNPK_CMNT	Additional details related to the system status information	String	400
---	-----------	---	--------	-----

Schema Definition

Name of file: **geminiapisystemstatshistoryres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="NM_SYS_HSTRY_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="NM_SYS_HSTRY_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="CLNDR_DAY" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DTL">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="SYS_STATS_HSTRY_DTL" minOccurs="0" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="UPDT_TM" type="xs:string"/>
                    <xs:element name="CURR_DMND" type="xs:float"/>
                    <xs:element name="OPN_LNPK" type="xs:float"/>
                    <xs:element name="PCLP1" type="xs:float"/>
                    <xs:element name="PCLP2" type="xs:float"/>
                    <xs:element name="SAP" type="xs:float" minOccurs="0"/>
                    <xs:element name="SMP_BUY" type="xs:float" minOccurs="0"/>
                    <xs:element name="SMP_SELL" type="xs:float" minOccurs="0"/>
                    <xs:element name="DAY_AHEAD_DMND" type="xs:float"/>
                    <xs:element name="LNPK_CMNT">
                      <xs:simpleType>
                        <xs:restriction base="xs:string">
                          <xs:maxLength value="400"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.24.4 API Specific Error Messages

None

2.2.25 View Shipper UIG Values

2.2.25.1 Overview

This API retrieves the Shippers Forecast or Allocated Unidentified Gas Share at LDZ level for the specified Gas Day and LDZ.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.2.25.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

</gemini/controllers/ShipperUIGAtLDZControllerAPI/>

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

</gemini/api/schema/geminiapishpruigatldzreq.xsd>

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

</gemini/api/schema/geminiapishpruigatldzres.xsd>

2.2.25.3 XML Specifications

2.2.25.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	SHPR UIG AT LDZ QRY	Top level hierarchy for query elements			
1	GAS_DAY	Gas Day for which Shipper UIG is requested.	Date	10	Yes
1	LDZ	Location code for which Shipper UIG are requested.	String	2	No

		If no LDZ location code is specified, the results of all LDZ location codes are returned in the response.			
1	ALLOC_OR_FCAST	Allocation/Forecast indicates the type of Shipper UIG A - Allocated F - Forecast	String	1	Yes

Schema Definition

Name of file: /gemini/api/schema/geminiapishpruigatldzreq.xsd

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_UIG_AT_LDZ_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="GAS_DAY" type="xs:date" minOccurs="1" maxOccurs="1" />
        <xs:element name="LDZ" minOccurs="0" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="2" />
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="ALLOC_OR_FCAST" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="1" />
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.2.25.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	SHPR_UIG_AT_LDZ_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	DateTime	19

Hierarchy	Data Element	Description	Data Type	Data length
1	SHPR_UIG_AT_LDZ_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
2	GAS_DAY	Gas Day for which Shipper UIG is requested.	Date	10
2	LDZ	Location code for which Shipper UIG are requested.	String	2
2	BA_CD	Business Associate Short Code	String	3
2	ALLOC_OR_FCAST	Allocation/Forecast indicates the type of Shipper UIG A - Allocated F - Forecast	String	1
1	DTL	Top-level hierarchy for Details.		
2	SHPR_UIG_AT_LDZ_DTL	Top-level hierarchy for Shipper UIG Details.		
3	LDZ	Location code for which Shipper UIG are requested.	String	2
3	ALLOC_OR_FCAST	Allocation/Forecast indicates the type of Shipper UIG A - Allocated F - Forecast	String	1
3	RUN_DATE	The date on which the Demand or Allocation was run	Date	10
3	RUN_TIME	The time when the latest demand or allocation batch was run This will be of the format hh:mm	String	5
3	UIG_SHARE	Unidentified energy calculated for the gas day for the LDZ, BA and A/F (kWh). This can either be a positive or a negative value.	Long	13

Schema Definition

Name of file: *geminiapishpruigatldzres.xsd*

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SHPR_UIG_AT_LDZ_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA" minOccurs="1" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime" minOccurs="1" maxOccurs="1" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="SHPR_UIG_AT_LDZ_QRY" minOccurs="1" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date" minOccurs="1" maxOccurs="1" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

```

<xs:element name="LDZ" type="xs:string" minOccurs="1" maxOccurs="1" />
<xs:element name="BA_CD" type="xs:string" minOccurs="1" maxOccurs="1" />
<xs:element name="ALLOC_OR_FCAST" type="xs:string" minOccurs="1" maxOccurs="1" />
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DTL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SHPR_UIG_AT_LDZ_DTL" minOccurs="1" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="LDZ" type="xs:string" minOccurs="1" maxOccurs="1" />
            <xs:element name="ALLOC_OR_FCAST" type="xs:string" minOccurs="1" maxOccurs="1" />
            <xs:element name="RUN_TIME" type="xs:string" minOccurs="1" maxOccurs="1" />
            <xs:element name="RUN_DATE" type="xs:date" minOccurs="1" maxOccurs="1" />
            <xs:element name="UIG_SHARE" type="xs:long" minOccurs="1" maxOccurs="1" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.2.25.4 API Specific Error Messages

See the API Usage Guidelines section 3.5.2. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

2.3 Entry Capacity Interfaces

2.3.1 All Active Bids

2.3.1.1 Overview

This API will retrieve all the bids that are competing for the next allocation process.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.3.1.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

[/gemini/controllers/ AllActiveBidsReportControllerAPI /](#)

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

[/gemini/api/schema/ geminiapiactivebidsreq.xsd](#)

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

[/gemini/api/schema/ geminiapiactivebidsres.xsd](#)

2.3.1.3 XML Specifications

An asterisk in the 'Hierarchy' column of API Request and Response element tables denotes an element or group that may occur multiple times.

2.3.1.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	ALL_ACTV_BIDS_QR	Top level hierarchy for query elements			
1	MOS	Method of sale name	string	8	Yes
1	SUBTX_STRT_DT	Sub transaction start date	date	10	Yes
1	SUBTX_END_DT	Sub transaction end date	date	10	Yes
1	TX_STRT_DT	Transaction start date	date	10	Yes
1	TX_END_DT	Transaction end date	date	10	Yes
1	SUBTNDR_ID	Sub Tender ID for a period of buy in transaction period	string	20	No
1	LCTNS	Top level hierarchy for location element			

2	LCTN	Location at which the bid information is considered. One or more locations can be input. To query for all locations, 'ALL' should be given as the value for this element.	string	10	Yes
---	------	---	--------	----	-----

Schema Definition

Name of file: **geminiapiactivebidsreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ALL_ACTV_BIDS_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MOS">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="8"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="SUBTX_STRT_DT" type="xs:date"/>
        <xs:element name="SUBTX_END_DT" type="xs:date"/>
        <xs:element name="LCTNS">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="LCTN" maxOccurs="unbounded">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="TX_STRT_DT" type="xs:date"/>
        <xs:element name="TX_END_DT" type="xs:date"/>
        <xs:element name="SUBTNR_ID" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

2.3.1.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	ALL_ACTV_BIDS_OUT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	dateTime	19
1	ALL_ACTV_BIDS_QRY	Top level hierarchy for meta information elements For child element details please refer to the request specification		
1	HEADER	Top level hierarchy for header elements		
2	PRDT	Product for which bids are queried	long	10
2	SUBTX_STRT_DT	Sub transaction start date	date	10
2	SUBTX_END_DT	Sub transaction end date	date	10
2	TX_STRT_DT	Transaction start date	date	10
2	TX_END_DT	Transaction end date	date	10
2	SUBTNDR_ID	Sub Tender ID for a period of buy in transaction period	string	20
1	DETAIL	Top level hierarchy for record fields Attribute "RECORD_NMBR" of this element, shows the sequence identifier of the record.		
2	BID_CPCTY	It is the total capacity of the bid that is being considered	long	13
2	BID_PRC	It is the price at which the bid is	float	6,4
2	BID_TMSTMP	It gives the date and time at which the last action was taken on the bid	dateTime	19
2	LCTN	Location description at which the bid information is considered.	string	10
2	BID_VAL	It is computed as the product of bid capacity and bid price.	float	15,2
2	OPTN_BID	This flag shows whether the bid is option type or not.	string	1
2	EXER_PRICE	Exercise price	float	6,4
2	PRM_PRICE	Premium price	float	6,4

Schema Definition

Name of file: **geminiapiactivebidsres.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ALL_ACTV_BIDS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

```

</xs:element>
<xs:element name="ALL_ACTV_BIDS_QRY">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="MOS">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="8"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="SUBTX_STRT_DT" type="xs:date"/>
      <xs:element name="SUBTX_END_DT" type="xs:date"/>
      <xs:element name="LCTNS">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="LCTN" maxOccurs="unbounded">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:maxLength value="10"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="TX_STRT_DT" type="xs:date"/>
      <xs:element name="TX_END_DT" type="xs:date"/>
      <xs:element name="SUBTNDR_ID" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="HEADER">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="PRDT" type="xs:long"/>
      <xs:element name="SUBTX_STRT_DT" type="xs:date"/>
      <xs:element name="SUBTX_END_DT" type="xs:date"/>
      <xs:element name="TX_STRT_DT" type="xs:date"/>
      <xs:element name="TX_END_DT" type="xs:date"/>
      <xs:element name="SUBTNDR_ID">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:element name="DETAIL" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="BID_CPCTY">
        <xs:simpleType>
          <xs:restriction base="xs:long">
            <xs:totalDigits value="13"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="BID_PRC" type="xs:float"/>
      <xs:element name="BID_TMSTMP" type="xs:dateTime"/>
      <xs:element name="LCTN">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="BID_VAL" type="xs:float"/>
      <xs:element name="OPTN_BID">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:length value="1"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="EXER_PRC" type="xs:float"/>
      <xs:element name="PRM_PRC" type="xs:float"/>
    </xs:sequence>
    <xs:attribute name="RECORD_NMBR" type="xs:int" use="optional"/>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.1.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be

the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_0004	The sub transaction end date cannot be less than the sub transaction start date
GEM_API_ERROR_0005	The transaction end date cannot be less than the transaction start date
GEM_API_ERROR_000	Period To cannot be less than Period From

2.3.2 Bid Information Normal Pricing

2.3.2.1 Overview

This API will provide the BA with information on the status of their bids for the Normal Pricing strategy.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.3.2.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ BidInformationReportControllerAPI /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapibidinfornormalreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapibidinfornormalres.xsd

2.3.2.3 XML Specifications

2.3.2.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	BID_INFO_NRML_PRCNG_QR	Top level hierarchy for query elements			
1	MOS	Method of sale	string	8	Yes

1	SUBTX_STRT_DT	Sub transaction start date For auctions of daily capacity all gas days between the sub- transaction start and end dates will be returned. For other auction types only one sub-transaction period can be returned and it must be exactly matched by the specified sub-transaction start and end dates.	date	10	Yes
1	SUBTX_END_DT	Sub transaction end date See SUBTX_STRT_DT for further information.	date	10	Yes
1	BID_STS	Bid Status	string	3	No
1	TX_STRT_DT	Transaction start date	date	10	Yes
1	TX_END_DT	Transaction end date	date	10	Yes
1	BIDWND_STRT_DT	Bid Window Period Start Date	date	10	Yes
1	BIDWND_END_DT	Bid Window Period Start Date	date	10	Yes
1	TRNCH_NMBR	Tranche Number	long	10	Yes
1	SUBTNDR_ID	Sub Tender ID for a period of buy in transaction period	string	20	No
1	LCTNS	Top level hierarchy for location element	N/A		
2	LCTN	Location input could be one or many. To query for all locations, 'ALL' should be given as the value for this	string	10	Yes

Schema Definition

Name of file: **geminiapibidinfonormalreq.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="BID_INFO_NRML_PRCNG_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MOS">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="8"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="LCTNS">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="LCTN" maxOccurs="unbounded">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="SUBTX_STRT_DT" type="xs:date" minOccurs="0"/>
        <xs:element name="SUBTX_END_DT" type="xs:date" minOccurs="0"/>
        <xs:element name="BID_STS" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="3"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TX_STRT_DT" type="xs:date"/>
        <xs:element name="TX_END_DT" type="xs:date"/>
        <xs:element name="BIDWND_STRT_DT" type="xs:date"/>
        <xs:element name="BIDWND_END_DT" type="xs:date"/>
        <xs:element name="TRNCH_NMBR">
          <xs:simpleType>
            <xs:restriction base="xs:long">
              <xs:totalDigits value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="SUBTNDR_ID" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.2.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	BID_INFO_NRML_PRCNG_OU	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	dateTime	19
1	BID_INFO_NRML_PRCNG_QRY	Top level hierarchy for meta information elements For child element details please refer to request specification.		
1	HEADER	Top level hierarchy for header fields		
2	PRDT	Product for which bids are queried.	long	10
2	TX_STRT_DT	Transaction start date	date	10
2	TX_END_DT	Transaction end date	date	10
2	BIDWND_STRT_DT	Bid Window Period Start Date	date	10
2	BIDWND_END_DT	Bid Window Period End Date	date	10
2	SUBTNDR_ID	Sub Tender ID	string	20
1	DETAIL	Top level hierarchy for record fields Attribute "RECORD_NMBR" of this element, shows the sequence identifier of the record.		
2	TRNCH_NMBR	Tranche Number of the Bid if it belongs to a MOS whose type of Auction is 'MULTIROUND'	long	10
2	SUBTX_PRD_FRM	Sub Transaction Period Start Date	date	10
2	SUBTX_PRD_TO	Sub Transaction Period End Date	date	10
		Date		
2	LCTN	Location at which the bid	string	10
2	BID_ID	Unique identifier for every bid	string	20
2	BID_CPCTY	It is the total capacity of the bid	long	13
2	FLOW_STRT_TM	Time at which the gas flow	dateTime	19
2	ENTLMNT	It gives the total allocated	long	13
2	ENTLMNT_PRC	It gives the allocated price if the	float	6,4
2	BID_PRC	It is the price at which the bid is	float	6,4
2	BID_STS	It gives the status of the bid	string	3
2	RSN_FOR_RJCTN	It gives the reason for rejection	string	5
2	SUBTNDR_ID	System Generated Id for a	string	20
2	BID_TMSTMP	Time stamp at which the bid is	dateTime	19

Schema Definition

Name of file: **geminiapibidinfonormalres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="BID_INFO_NRML_PRCNG_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="BID_INFO_NRML_PRCNG_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="MOS">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="8"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="LCTNS">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="LCTN" maxOccurs="unbounded">
                      <xs:simpleType>
                        <xs:restriction base="xs:string">
                          <xs:maxLength value="10"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
              <xs:element name="SUBTX_STRT_DT" type="xs:date" minOccurs="0"/>
              <xs:element name="SUBTX_END_DT" type="xs:date" minOccurs="0"/>
              <xs:element name="BID_STS" minOccurs="0">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="3"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TX_STRT_DT" type="xs:date"/>
              <xs:element name="TX_END_DT" type="xs:date"/>
              <xs:element name="BIDWND_STRT_DT" type="xs:date"/>
              <xs:element name="BIDWND_END_DT" type="xs:date"/>
              <xs:element name="TRNCH_NMBR">
                <xs:simpleType>
                  <xs:restriction base="xs:long">
                    <xs:totalDigits value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="SUBTNDR_ID" minOccurs="0">
```

```

    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="20"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DETAIL" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TRNCH_NMBR">
        <xs:simpleType>
          <xs:restriction base="xs:long">
            <xs:totalDigits value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="SUBTX_PRD_FRM" type="xs:date"/>
      <xs:element name="SUBTX_PRD_TO" type="xs:date"/>
      <xs:element name="LCTN">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="BID_ID">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="BID_CPCTY">
        <xs:simpleType>
          <xs:restriction base="xs:long">
            <xs:totalDigits value="13"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="FLOW_STRT_TM" type="xs:dateTime"/>
      <xs:element name="ENTLMNT">
        <xs:simpleType>
          <xs:restriction base="xs:long">
            <xs:totalDigits value="13"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="ENTLMNT_PRC" type="xs:float"/>
      <xs:element name="BID_PRC" type="xs:float"/>
      <xs:element name="BID_STS">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="3"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="RSN_FOR_RJCTN">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="5"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="SUBTNDR_ID">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="BID_TMSTMP" type="xs:dateTime"/>
</xs:sequence>
<xs:attribute name="RECORD_NMBR" type="xs:int" use="optional"/>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.2.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_0004	The sub transaction end date cannot be less than the sub transaction start date
GEM_API_ERROR_0005	The transaction end date cannot be less than the transaction start date
GEM_API_ERROR_000	Period To cannot be less than Period From

2.3.3 Capacity Trade Details

2.3.3.1 Overview

This API will retrieve the trades that are registered by the BA.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.3.3.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ TradeDetailsApiController /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapicaptradedetailsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapicaptradedetailsres.xsd

2.3.3.3 XML Specifications

2.3.3.3.1 API Request

Capacity Trade details can be queried by either one of the query criteria as given below.

1. QRY_CRTR_1 – By providing Product Type, Product Category, Service Type, Contract Type, Period and Location.
2. QRY_CRTR_2 – By providing Trade Reference Number.
3. QRY_CRTR_3 – By providing Bid Id.

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory

0	CPCTY_TRD_DTL_QRY	Top level hierarchy for query elements This element contains a 'TO_PROCESS' attribute that would contain one of the below values. QRY_CRTR_1 QRY_CRTR_2 QRY_CRTR_3			
1	QRY_CRTR_1	Query condition with below element set			
2	PRDT_TYP	All tradable product types	string	20	Yes
2	PRDT_CTGRY	Category of the Product	string	1	Yes
2	SRVC_TYP	Type of Service	string	20	Yes
2	CNTRCT_TYP	Type of Contract	string	1	Yes
2	PRD_FRM	Time period From for query	date	10	Yes
2	PRD_TO	Time period To for query	date	10	Yes
2	TRD_STS	Status of the trade	string	1	No
2	LCTNS	Top level hierarchy for location element	N/A		
3	LCTN	Location for which trades have been done. One or more locations can be input. To query for all locations, 'ALL' should be given as the value for this element.	string	10	Yes
1	QRY_CRTR_2	Query condition with below element set			
2	TRD_REF_NMBR	Trade Reference - Unique Identifier for a trade	string	15	Yes
1	QRY_CRTR_3	Query condition with below element set			
2	BID_ID	Bid Id	string	20	Yes

Schema Definition

Name of file: **geminiapicatradedetailsreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="CPCTY_TRD_DTL_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="QRY_CRTR_1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRDT_TYP">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PRDT_CTGRY">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:length value="1"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

```

<xs:element name="SRVC_TYP">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CNTRCT_TYP">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PRD_FRM" type="xs:date"/>
<xs:element name="PRD_TO" type="xs:date"/>
<xs:element name="TRD_STS" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" maxOccurs="unbounded">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="QRY_CRTR_2">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TRD_REF_NMBR">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="15"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QRY_CRTR_3">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="BID_ID">

```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="20"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute name="TO_PROCESS" type="xs:string" use="optional" default="QRY_CRTR_1"/>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.3.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	CPCTY_TRD_DTL_O UT	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	dateTime	19
1	CPCTY_TRD_DTL_Q RY	Top level hierarchy for meta information elements For child element details please refer to request specification.		
1	DETAIL	Top level hierarchy for header fields Attribute "RECORD_NMBR" of this element, shows the sequence identifier of the record.		
2	SELL_BA	Business Associate short code of the Business Associate who sells the trade	string	3
2	BUY_BA	Business Associate short code of the Business Associate who buys the trade	string	3
2	TRD_REF_NMBR	Trade Reference	string	15
2	TRD_TM	Time of Registration of Trade	dateTime	19
2	LCTN	Location	string	10
2	TRD_QTY	The quantity of capacity being traded. (kWh)	long	13
2	TRD_PRC	Unit price for the trade being done between Business Associates. (p/kWh)	float	6,4
2	PRD_FRM	Trade start Date	date	10
2	PRD_TO	Trade end Date	date	10
2	TRD_STS	Trade Status	string	1
2	BID_ID	Bid Id	string	20
2	EXER_PRC	Exercise price for the trade. This field will be displayed if the Bid Id is present.	float	6,4
2	RMNG_EXRCSBL_D AYS	Remaining no of Exercisable Days. This field will be displayed if the Bid Id is present.	long	10

2	LTST_EXRCSBL_DAY	Latest Exercisable Days. This field will be displayed if the Bid Id is present.	long	10
2	LTST_EXRCSBL_TM	Latest Exercisable Time. This field will be displayed if the Bid Id is present.	dateTime	19
2	ERLST_EXRCSBL_D A Y	Earliest Exercisable Days. This field will be displayed if the Bid Id is present.	long	10
2	ERLST_EXRCSBL_TM	Earliest Exercisable Time. This field will be displayed if the Bid Id is present.	dateTime	19
2	PRM_PRC	Premium price. This field will be displayed if the Bid Id is present.	float	6,4
2	BID_TYP	Bid Type. This field will be displayed if the Bid Id is present.	string	1
2	MIN_QTY	Minimum Quantity. This field will be displayed if the Bid Id is present.	long	13
2	MAX_QTY	Maximum Quantity. This field will be displayed if the Bid Id is present.	long	13

Schema Definition

Name of file: **geminiapicaptradedetailsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="CPCTY_TRD_DTL_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="CPCTY_TRD_DTL_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="QRY_CRTR_1">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="PRDT_TYP">
                      <xs:simpleType>
                        <xs:restriction base="xs:string">
                          <xs:maxLength value="20"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                    <xs:element name="PRDT_CTGRY">
                      <xs:simpleType>
                        <xs:restriction base="xs:string">
                          <xs:length value="1"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="SRVC_TYP">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="20"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="CNRCT_TYP">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:length value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="PRD_FRM" type="xs:date"/>
    <xs:element name="PRD_TO" type="xs:date"/>
    <xs:element name="TRD_STS" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="LCTNS">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="LCTN" maxOccurs="unbounded">
            <xs:simpleType>
              <xs:restriction base="xs:string">
                <xs:maxLength value="10"/>
              </xs:restriction>
            </xs:simpleType>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QRY_CRTR_2">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TRD_REF_NMBR">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="15"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QRY_CRTR_3">

```

```

<xs:complexType>
  <xs:sequence>
    <xs:element name="BID_ID">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="20"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:sequence>
  <xs:attribute name="TO_PROCESS" type="xs:string" use="optional" default="QRY_CRTR_1"/>
</xs:complexType>
</xs:element>
<xs:element name="DETAIL" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SELL_BA">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:length value="3"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="BUY_BA">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:length value="3"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TRD_REF_NMBR">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="15"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TRD_TM" type="xs:dateTime"/>
      <xs:element name="LCTN">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TRD_QTY">
        <xs:simpleType>
          <xs:restriction base="xs:long">
            <xs:totalDigits value="13"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TRD_PRC" type="xs:float"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:element name="PRD_FRM" type="xs:date"/>
<xs:element name="PRD_TO" type="xs:date"/>
<xs:element name="TRD_STS">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="BID_ID">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="EXER_PRC" type="xs:float"/>
<xs:element name="RMNG_EXRCSBL_DAYS">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LTST_EXRCSBL_DAY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LTST_EXRCSBL_TM" type="xs:dateTime"/>
<xs:element name="ERLST_EXRCSBL_DAY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="ERLST_EXRCSBL_TM" type="xs:dateTime"/>
<xs:element name="PRM_PRC" type="xs:float"/>
<xs:element name="BID_TYP">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MIN_QTY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MAX_QTY">

```

```

<xs:simpleType>
  <xs:restriction base="xs:long">
    <xs:totalDigits value="13"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
</xs:sequence>
<xs:attribute name="RECORD_NMBR" type="xs:int" use="optional"/>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.3.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_000	Period To cannot be less than Period From

2.3.4 Capacity Trade Registration

2.3.4.1 Overview

BAs register new Trades using this API. The API will update the associated information in Gemini. This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.3.4.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ TradeDetailsAPIController /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapicaptraderegreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapicaptraderegres.xsd

2.3.4.3 XML Specifications

2.3.4.3.1 API Request

Element Table

Hierarchy	Data Element	Description	Data Type	Data Length	Mandatory
0	CPCTY_TRD_REGN_INP	Top level hierarchy for field elements			
1	BUY_BA	Business Associate short code of the Business Associate who buys the trade	string	3	Yes
1	PRDT_TYP	Type of Product E.g. Entry Capacity, Exit Capacity.	string	20	Yes
1	PRDT_CTGRY	Category of the Product	string	1	Yes
1	SRVC_TYP	Service Type	string	20	No
1	CNTRCT_TYP	Type of Contract	string	1	No
1	LCTN	Location for which trades needs to be done.	string	10	Yes
1	PRD_FRM	Trade start date.	date	10	Yes
1	PRD_TO	Trade end date.	date	10	Yes

Schema Definition

Name of file: **geminiapicaptraderegrex.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="CPCTY_TRD_REGN_INP">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="BUY_BA">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="3"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PRDT_TYP">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PRDT_CTGRY">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:length value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="SRVC_TYP" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CNRCT_TYP" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTN">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PRD_FRM" type="xs:date"/>
<xs:element name="PRD_TO" type="xs:date"/>
<xs:element name="TRD_QTY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="TRD_PRC" type="xs:float" minOccurs="0"/>
<xs:element name="TRD_REF_NMBR" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="15"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="BID_ID" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.4.3.2 API Response

Element Table

Hierarchy	Data Element	Description	Data Type	Data length
0	CPCTY_TRD_REGN_OU	Top level hierarchy for output elements		
1	METADATA	Top level hierarchy for meta information elements		
2	TMSTMP	Time stamp of API access	dateTime	19
1	CPCTY_TRD_REGN_INP	Top level hierarchy for meta information elements For child element details please refer to request specification.		
1	DETAIL	Top level hierarchy for header fields		
2	TRD_REF_NMBR	The trade reference number generated by the system when the trade is registered	string	15

Schema Definition

Name of file: **geminiapicaptraderegres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="CPCTY_TRD_REGN_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="CPCTY_TRD_REGN_INP">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="BUY_BA">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:length value="3"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PRDT_TYP">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PRDT_CTGRY">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:length value="1"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

</xs:simpleType>
</xs:element>
<xs:element name="SRVC_TYP" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="CNTRCT_TYP" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTN">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PRD_FRM" type="xs:date"/>
<xs:element name="PRD_TO" type="xs:date"/>
<xs:element name="TRD_QTY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="13"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="TRD_PRC" type="xs:float" minOccurs="0"/>
<xs:element name="TRD_REF_NMBR" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="15"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="BID_ID" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DETAIL">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TRD_REF_NMBR">
        <xs:simpleType>
          <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="15"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.4.4 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_000	Period To cannot be less than Period From

Note that this API does not indicate success by the return of an associated success message. Rather a successful update is indicated by the return of a trade reference number.Revised Entitlements

2.3.4.5 Overview

This API retrieves the daily entitlement for a location, for a Method Of Sale, and for the period mentioned. The API retrieves details for all the capacity days within the input period.

This specification contains interface details (relevant URLs, request and response XML message formats, specific error messages) for this API. For more general guidance on API function and usage, see the API Usage Guidelines document.

2.3.4.6 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/gemini/controllers/ EntitlementsReportControllerAPI /

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/gemini/api/schema/ geminiapientitlementsreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/gemini/api/schema/ geminiapientitlementsres.xsd

2.3.4.7 XML Specifications

2.3.4.7.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	ENTLMNTS_OUT	Top-level hierarchy for output elements.				
1	PRDT_TYP	Product Type	Product for which the entitlements are required.	String	20	Y
1	PRD_FRM	Period From	Start Date of the Capacity Period range for which the entitlements are required.	Date	10	Y
1	PRD_TO	Period To	End Date of the Capacity Period range for which the entitlements are required.	Date	10	Y

Schema Definition

Name of file: **geminiapi entitlementsreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ENTLMNTS_QRY">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="LCTN">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PRDT_TYP">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PRD_FRM" type="xs:date"/>
        <xs:element name="PRD_TO" type="xs:date"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

2.3.4.7.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	ENTLMNTS_OUT	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access	DateTime	19
1	ENTLMNTS_QRY	Top-level hierarchy for query elements.			
2	PRDT_TYP	Product Type	Product for which the entitlements are required.	String	20
2	PRD_FRM	Period From	Gas Day Period From	Date	10
2	PRD_TO	Period To	Gas Day Period To	Date	10
2	LCTN	Location	Location Code	String	10
1*	DETAIL	Top level hierarchy for header fields Attribute "RECORD_NMBR" of this element, shows the sequence identifier of the record.			
2	CPCTY_DAY	Gas Day	Capacity Day	Date	10
2	NET_CPCTY	Net Capacity (kWh)	The net capacity on a particular capacity day in kWh	Long	20
2	NET_FRM_CPCTY	Net Firm (kWh)	The net firm capacity on a particular capacity day in kWh	Long	20
2	NET_INTR_CPCTY	Net Interruptible (kWh)	The net interruptible capacity on a particular capacity day in kWh	Long	20
2	NET_SCLD_INTR_CPCTY	Net Scaled interruptible(kWh)	The net-scaled interruptible capacity on a particular capacity day in kWh	Long	20
2	LCTN	Location	Location Code for entitlement	String	10

Schema Definition

Name of file: **geminiapientitlementsres.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ENTLMNTS_OUT">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="METADATA">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="TMSTMP" type="xs:dateTime"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="ENTLMNTS_QRY">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="LCTN">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PRDT_TYP">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PRD_FRM" type="xs:date"/>
              <xs:element name="PRD_TO" type="xs:date"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DETAIL" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="CPCTY_DAY" type="xs:date"/>
              <xs:element name="NET_CPCTY">
                <xs:simpleType>
                  <xs:restriction base="xs:long">
                    <xs:totalDigits value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="NET_FRM_CPCTY">
                <xs:simpleType>
                  <xs:restriction base="xs:long">
                    <xs:totalDigits value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="NET_INTR_CPCTY">
                <xs:simpleType>
                  <xs:restriction base="xs:long">
                    <xs:totalDigits value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```



```

</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="NET_SCLD_INTR_CPCTY">
  <xs:simpleType>
    <xs:restriction base="xs:long">
      <xs:totalDigits value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTN">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
<xs:attribute name="RECORD_NMBR" type="xs:int" use="optional"/>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

2.3.4.8 API Specific Error Messages

This API can return the following specific error messages. These are in addition to any generic error messages that the API can return. See the API Usage Guidelines section 5.1. Where different APIs return messages with the same code, the meaning will be the same.

Note that, though message codes will stay fixed, message descriptions can be changed without formal notification to improve clarity.

Table 1 - API Specific Error Messages

Message Code	Message
GEM_API_ERROR_000	Period To cannot be less than Period From

3. Gemini Exit APIs

3.1 IP Locations

3.1.1 EU Code Changes IP Exit Entitlement API Spec

3.1.1.1 Overview

This specification contains the interface details (e.g. relevant URLs, request and response XML message formats, specific error messages) for the Exit IP Entitlement Report API. Shippers can send API request to Gemini to query or view exit entitlements. This API will be sent by Shippers on an ad-hoc basis. For more general guidance on API function and usage, refer to the Gemini Exit API Usage Guidelines.

The Exit IP Entitlement Report API provides the NTS Exit Capacity Entitlement data at Gemini Exit Interconnector Points and Sub Transaction Period.

The Exit IP Entitlement Report API can be accessed by Shippers.

3.1.1.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/ exit/controllers/ExIPEntitlementsReportControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/ exit/api/schema/exapiipentitlementreportreq.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/ exit/api/schema/exapiipentitlementreportres.xsd

3.1.1.3 XML Specifications

3.1.1.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	IPEXEntitlementReportQry		Top-level hierarchy for query elements.			

1	PRODUCT_TYPE	Product Type	Product type for which bids are queried. Allowed value – NTS EXIT FLAT CAPACITY	String	100	Yes
1	LCTN	Location	Interconnector NTS Exit Point associated with the method of sale. Location Code may be input for one or all locations. 'ALL' needs to be input for all locations	String	20	Yes
1	PERIOD_FROM	Period From	The start date from which the details will be queried. Date should be in the format YYYY-MM-DD	String	10	Yes
1	PERIOD_TO	Period To	The end date until which the details will be queried. Date should be in the format YYYY-MM-DD	String	10	Yes
1	TYPE_ENTLMNT	Type of Bundled	This field represents whether the API request is to query for bundled and/or un bundled entitlements Possible values: Bundled - To query for bundled entitlements only Unbundled - To query for unbundled entitlements only Aggregate - To query for aggregate of bundled and unbundled entitlements Both - To query for both bundled and unbundled entitlements separately	String	9	Yes

Schema Definition

Name of file: **exapiipentitlementreportreq.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="IPEXEntitlementReportQry">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="PRODUCT_TYPE" minOccurs="1" maxOccurs="1">

```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="100"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="LCTN" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="TYPE_ENTLMNT" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="09"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.1.1.3.2 API Response

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length
0	IPEXEntitlementReportRes		Top-level hierarchy for output elements.		
1	METADATA		Top-level hierarchy for meta information elements.		
2	TMSTMP		Timestamp of API access.	DateTime	19
1	IPEXEntitlementReportQry		Top-level hierarchy for query elements.		
1	HEADER		Top-level hierarchy for header fields.		

2	PRODUCT_TYPE	Product Type	Product type for which bids are queried.	String	100
2	LCTN	Location	The Interconnector NTS Exit Point for which the data is requested.	String	20
2	PERIOD_FROM	Period From	The start date from which the details will be queried. Date should be in the format YYYY-MM-DD	String	10
2	PERIOD_TO	Period To	The end date until which the details will be queried. Date should be in the format YYYY-MM-DD	String	10
2	TYPE_ENTLMNT	Type of Bundled	This field represents the type of entitlement which was queried. This field will be blank if the Gas Day queried is prior to 01-Oct-2015.	String	09
1	DETAIL	Top level hierarchy for record fields.			
2	LCTN	Location	The Interconnector NTS Exit Point for which the data is requested.	String	20
2	TYPE_ENTLMNT	Type of Bundled	This field represents the type of entitlement which was queried. This field will be blank if the Gas Day queried is prior to 01-Oct-2015.	String	09
2	GAS_DAY	Gas Day	Information will be retrieved for the Gas Day provided as part of this field. This date should be within Transaction Period, and be in the format YYYY-MM-DD.	Date	10
2	BA_CODE	Business Associate	The BA Code for an External User, as registered in the system, for which the Entitlements are queried.	String	03
2	NET_CAPACITY	Net Capacity	The sum of Net Firm and Net Scaled Interruptible Entitlements for the queried Interconnector NTS Exit Point for a particular User and Gas Day.	Long	13

2	NET_FIRM	Net Firm	The Net Firm Entitlements for the queried Interconnector NTS Exit Point for a particular User and Gas Day.	Long	1 3
2	NET_OFFPEAK	Net Off-peak	The Net Off-Peak Entitlements for the queried Interconnector NTS Exit Point for a particular User and Gas Day.	Long	1 3
2	NET_SCALED_OFFPEAK	Net Scaled Off-peak	The Net Off-Peak Entitlements, after any Constraints or Restorations.	Long	1 3

Schema Definition

Name of file: **exapiipentitlementreportres.xsd**

```
<?xml version="1.0" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="IPEXEntitlementReportRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name=" IPEXEntitlementReportQry" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT_TYPE" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="30"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TYPE_ENTLMNT" minOccurs="1" maxOccurs="1">
```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="9"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DETAIL" minOccurs="1" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TYPE_ENTLMNT" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="9"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="GAS_DAY" type="xs:date" minOccurs="1" maxOccurs="1"/>
      <xs:element name="BA_CODE" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="3"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="NET_CAPACITY" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="NET_FIRM" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="NET_OFFPEAK" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="NET_SCALED_OFFPEAK" minOccurs="1" maxOccurs="1"
type="xs:long"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.1.1.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Table 1 - API Specific Error Messages

Error Code	Error Message
GEM_API_ERROR_0006	Period To cannot be less than Period From

GEM_API_ERROR_0500	Product Type is incorrect
GEM_API_ERROR_0501	Invalid type of Entitlement
GEM_API_ERROR_0502	Location not an Interconnector Point
GEM_API_ERROR_0503	Incorrect date format of Period From/ Period To

For more information relating to generic error messages, refer to the Gemini Exit API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (e.g., to improve clarity).

3.2 Exit Capacity Interface

3.2.1 All Active Bids

3.2.1.1 Overview

This specification contains the interface details (eg relevant URLs, request and response XML message formats, specific error messages) for the All Active Requests API. For more general guidance on API function and usage, refer to the Gemini NTS Exit API Usage Guidelines.

The All Active Requests API will retrieve all the 'NEW' status requests for Daily Auctions (DADNEX, WDDNEX, DONEX and DBNEX).

- All the active requests will be retrieved (NB: the BA identity for each record will be removed)
- Only those Method of Sale (MoS) instances where 'Transparency' has been set to 'Open' during the MoS setup will be considered
- Only those MoS with an open 'Request Window' will be considered. The All Active Requests API can be accessed by:
 - Shippers
 - Distribution Network Operators (DNOs).

3.2.1.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/exit/controllers/ExAllActiveRequestControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/exit/api/schema/exapiallactiverequest.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/exit/api/schema/exapiallactiveresponse.xsd

3.2.1.3 XML Specifications

3.2.1.3.1 API Request

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length	Mand- atory
0	AllActvReqQry		Top-level hierarchy for query elements.			

1	MOS	Method of Sale	Method of Sale name. Only MoS for Daily Auctions are valid.	String	20	Yes
1	TX_STRT_DT	Transaction Period	Transaction Period Start Date Information may be requested for only one Transaction Period. Date should be in the format YYYY-MM-DD.	String	10	Yes
1	TX_END_DT	Transaction Period	Transaction Period End Date Information may be requested for only one Transaction Period. Date should be in the format YYYY-MM-DD.	String	10	Yes
1	GAS_DAY	Gas Day	Information will be retrieved for the Gas Day provided as part of this field. This date should be within the Transaction Period, and be in the format YYYY-MM-DD.	String	10	Yes
1	LCTNS	Top-level hierarchy for Location element.				
2	LCTN	Location	Location Code may be input for one or All Locations. To query all Locations, this element value should be set to 'ALL'. To retrieve data related to an individual Location, the Location Code should be entered.	String	20	Yes

Schema Definition

Name of file: **exapiallactiverequest.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="AllActvReqQry">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MOS" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
<xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

```

<xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="GAS_DAY" type="xs:string" minOccurs="1" maxOccurs="1"/>
<xs:element name="LCTNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" maxOccurs="unbounded">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.1.3.2 API Response

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length
0	AllActvReqRes	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access.	DateTime	19
1	AllActvReqQry	Top-level hierarchy for query elements.			
1	HEADER	Top-level hierarchy for header fields.			
2	PRODUCT	Product	Product for which bids are queried.	String	100
2	MOS	Method of Sale	Method of Sale name. Only MoS for Daily Auctions are valid.	String	20
2	TX_STRT_DT	Transaction Period	Information will be retrieved for the given Transaction Period Start Date. This date should be in the format YYYY- MM-DD.	String	10

2	TX_END_DT	Transaction Period	Information will be retrieved for the given Transaction Period End Date. This date should be in the format YYYY-MM-DD.	String	10
1	DETAIL	Top level hierarchy for record fields.			
2	GAS_DAY	Gas Day	Information will be retrieved for the Gas Day provided as part of this field. This date should be within the Transaction Period, and be in the format YYYY-MM-DD.	Date	10
2	LCTN	Location	The NTS Exit Point for which the data is requested.	String	20
2	MAX_QTY	Maximum Requested Capacity	The Maximum Capacity Requested by the External User.	Long	13
2	REQ_PRICE	Request Price	The 'Price' at which a request is submitted by the External User.	Number (6,4)	7
2	REQ_VALUE	Request Value	The value calculated for the request placed.	Number (15,2)	16
2	REQ_TIMESTAMP	Timestamp	The time at which the request is saved either after addition or modification in the system in the Capture Request screen.	DateTime	19

Schema Definition

Name of file: **exapiallactivereqresponse.xsd**

```
<?xml version="1.0" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="AllActvReqRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name="AllActiveReqResponse" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="100"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="MOS" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DETAILS" minOccurs="1" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="GAS_DAY" type="xs:date" minOccurs="1" maxOccurs="1"/>
      <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="MAX_QTY" minOccurs="1" maxOccurs="1" type="xs:long"/>
      <xs:element name="REQ_PRICE" minOccurs="1" maxOccurs="1" type="xs:float"/>
      <xs:element name="REQ_VALUE" minOccurs="1" maxOccurs="1" type="xs:float"/>
      <xs:element name="REQ_TIMESTAMP" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.1.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Table 1 - API Specific Error Messages

Error Code	Error Message
NEX_API_ERROR_0017	Invalid MoS Name
NEX_API_ERROR_0006	Only Daily Auctions are valid
NEX_API_ERROR_0014	Transaction Start Date Format Invalid
NEX_API_ERROR_0015	Transaction End Date Format Invalid

NEX_API_ERROR_0016	Transaction Start Date should be less than or equal to Transaction End Date
NEX_API_ERROR_0007	Gas Day format Invalid
NEX_API_ERROR_0005	Gas Day should be within Transaction Period
NEX_API_ERROR_0013	No active short term MoS instance exists for the transaction period requested

For more information relating to generic error messages, refer to the Gemini NTS Exit API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (eg to improve clarity).

3.2.2 All Active Bids

3.2.2.1 Overview

This specification contains the interface details (eg relevant URLs, request and response XML message formats, specific error messages) for the Auction Request Information API. For more general guidance on API function and usage, refer to the Gemini NTS Exit API Usage Guidelines.

The Auction Request Information API will provide Business Associates with information on the status of their requests for the Daily Auctions Sell and Buy (DADNEX, WDDNEX, DONEX and DBNEX).

All the request information will be retrieved, with respect to External User. The Auction Request Information API can be accessed by:

- Shippers
- Distribution Network Operators (DNOs).

3.2.2.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/exit/controllers/ExRequestInfoReportControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/exit/api/schema/exapireqinforequest.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/exit/api/schema/exapireqinforesponse.xsd

3.2.2.3 XML Specifications

3.2.2.3.1 API Request

Element Table

Hierarchy	Data Element	Screen Label	Description	Data Type	Data Length	Mandatory
0	ReqInfoQry	Top-level hierarchy for query elements.				
1	MOS	Method of Sale	Method of Sale name. Only MoS for Daily auctions are valid.	String	20	Yes

1	TX_STRT_DT	Transaction Period	Transaction Period Start Date Information may be	String	10	Yes
1	TX_END_DT	Transaction Period	Transaction Period End Date Information may be	String	10	Yes
1	PERIOD_FROM	Period From	The start date from which the details will be queried.	String	10	Yes
1	PERIOD_TO	Period To	The end date until which the details will be queried.	String	10	Yes
1	REQ_STATUS	Request Status	Represents the status of the request that has been placed.	String	3	Yes
1	LCTNS	Top-level hierarchy for Location element.				
2	LCTN	Location	Location Code may be input for one or All locations. To query for all locations, this element value should be set to 'ALL' or enter the individual Location Code to fetch data related to a Location.	String	20	Yes

Schema Definition

Name of file: **exapireqinforequest.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ReqInfoQry">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MOS" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
          <xs:simpleType>

```



```

    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="REQ_STATUS" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="3"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" maxOccurs="unbounded">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:schema>

```

3.2.2.3.2 API Response

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length
0	ReqInfoRes		Top-level hierarchy for output elements.		
1	METADATA		Top-level hierarchy for meta information elements.		

2	TMSTMP		Timestamp of API access.	DateTime	19
1	ReqInfoQry	Top-level hierarchy for query elements.			
1	HEADER	Top-level hierarchy for header fields.			
2	PRODUCT	Product	Product for which bids are queried.	String	100
2	MOS	Method of Sale	Method of Sale name. Only MoS for Daily Auctions are valid.	String	20
2	TX_STRT_DT	Transaction Period	Information will be retrieved for the provided Transaction Period Start Date. This date should be in the format YYYY-MM-DD.	String	10
2	TX_END_DT	Transaction Period	Information will be retrieved for the provided Transaction Period End Date. This date should be in the format YYYY-MM-DD.	String	10
1	DETAIL	Top level hierarchy for record fields.			
2	LCTN	Location	The NTS Exit Point for which the data is requested	String	20
2	SUB_TX_PERIOD	Sub Transaction Period	The sub period within which the Daily Auctions can occur for the instance of the MoS. This date should be in the format YYYY-MM-DD to YYYY-MM-DD.	String	24
2	MAX_QTY	Maximum Requested Capacity	The Maximum Capacity Requested by the External User	Long	13
2	MIN_QTY	Minimum Requested Capacity	The Minimum Capacity Requested by the External User	Long	13
2	ALLOC_QTY	Allocated Quantity	Represents the capacity allocated to the External User	Long	13
2	FLOW_ST_TIME	Flow Start Time	The time from which the actual flow starts for an allocated request	DateTime	10
2	REQ_TYPE	Request Type	Denotes the type of request as 'Evergreen' or 'Reducing'	String	1
2	REQ_TRANS_FLAG	Request Transfer Flag	Represents whether the Request is Transferable to another Auction Type or not	String	3
2	STATUS	Status	The status of the Requests	String	3
2	REASON	Reason	The 'Reason' corresponding to the 'Reason Code' assigned during rejection or partial allocation of a Request	String	100

2	REQ_PRICE	Request Price	The 'Price' at which a request is submitted by the External User	Number (6,4)	7
2	REQ_ID	Request ID	The unique identifier for a Request placed by the External User	String	60

Schema Definition

Name of file: **exapireqinforesponse.xsd**

```
<?xml version="1.0" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ReqInfoRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name="ReqInfoResponse" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="100"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="MOS" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DETAILS" minOccurs="1" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="20"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="SUB_TX_PERIOD" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="24"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MAX_QTY" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="MIN_QTY" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="ALLOC_QTY" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="FLOW_ST_TIME" type="xs:dateTime" minOccurs="1"
maxOccurs="1"/>
<xs:element name="REQ_TYPE" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="REQ_TRANS_FLAG" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="STATUS" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="3"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="REASON" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="100"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="REQ_PRICE" minOccurs="1" maxOccurs="1" type="xs:float"/>
<xs:element name="REQ_ID" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="60"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>

```

```

</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.2.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Table 1 - API Specific Error Messages

Error Code	Error Message
NEX_API_ERROR_0017	Invalid MoS Name
NEX_API_ERROR_0006	Only Daily Auctions are valid
NEX_API_ERROR_0014	Transaction Start Date Format Invalid
NEX_API_ERROR_0015	Transaction End Date Format Invalid
NEX_API_ERROR_0016	Transaction Start Date should be less than or equal to Transaction End Date
NEX_API_ERROR_0010	Period From Date Format Invalid
NEX_API_ERROR_0011	Period To Date Format Invalid
NEX_API_ERROR_0008	Period From Date should be less than or equal to Period To Date
NEX_API_ERROR_0009	Period From and Period To dates should be within Transaction Period
NEX_API_ERROR_0013	No active short term MoS instance exists for the transaction period requested

For more information relating to generic error messages, refer to the Gemini NTS Exit API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (eg to improve clarity).

3.2.3 Entitlement Report

3.2.3.1 Overview

This specification contains the interface details (eg relevant URLs, request and response XML message formats, specific error messages) for the Entitlement Report API. For more general guidance on API function and usage, refer to the Gemini NTS Exit API Usage Guidelines.

The Entitlement Report API provides the capacity entitlement data at every Location and Sub Transaction Period of a daily auction.

The Entitlement Report API can be accessed by:

- Shippers
- Distribution Network Operators (DNOs)
- Allocation Agents.

Note: The data returned by this API is dependent on User role. Full details are provided in Table 1.3.2 API Response, below.

3.2.3.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/ exit/controllers/ExEntitlementsReportControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/ exit/api/schema/exapientitlementreportrequest.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/ exit/api/schema/exapientitlementreportresponse.xsd

3.2.3.3 XML Specifications

3.2.3.3.1 API Request

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length	Mand- atory
0	EntitlementReportQry		Top-level hierarchy for query elements.			

1	LCTN	Location	Location Code for a single NTS Exit Point	String	20	Yes
1	PRODUCT_TYPE	Product Type	Product type for which bids are queried.	String	100	Yes
1	PERIOD_FROM	Period From	The start date from which the details will be queried	String	10	Yes
1	PERIOD_TO	Period To	The end date until which the details will be queried	String	10	Yes

Schema Definition

Name of file: **exapi entitlementreportrequest.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="EntitlementReportQry">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PRODUCT_TYPE" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="100"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

3.2.3.3.2 API Response

Element Table

Hier-archy	Data Element	Screen Label	Description	Data Type	Data Length
0	EntitlementReportRes	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access.	DateTime	19
1	EntitlementReportQry	Top-level hierarchy for query elements.			
1	HEADER	Top-level hierarchy for header fields.			
2	PRODUCT_TYPE	Product Type	Product type for which bids are queried.	String	100
2	LCTN	Location	The NTS Exit Point for which the data is requested.	String	24
1	DETAIL	Top level hierarchy for record fields.			
2	GAS_DAY	Gas Day	Information will be retrieved for the Gas Day provided as part of this field. This date should be within Transaction Period, and be in the format YYYY-MM-DD.	Date	10
2	BA_CODE	Business Associate	The BA Code for an External User, as registered in the system, for which the Entitlements are queried. Note: <u>For Allocation Agents</u> , the BA Code represents all the BAs associated to the corresponding Allocation Agent.	String	24
2	NET_CAPACITY	Net Capacity	<u>For DNO Users</u> : The sum of Net Firm, Net Scaled Off-peak Entitlements and Entitlement Swap. <u>For Shippers and Allocation Agents</u> : The sum of Net Firm and Net Scaled Off-peak Entitlements.	Long	13
2	NET_FIRM	Net Firm Capacity	The Net Firm Entitlements for the queried NTS Exit Point at a Location and for a particular User.	Long	13
2	ORIGINAL_OFFPEAK	Original Off-peak Capacity	The Original Off-peak Entitlements, prior to any Constraints or Restorations.	Long	13

2	NET_SCALED_OFFPEAK	Net Scaled Off-peak Capacity	The Net Off-peak Entitlements, after any Constraints or Restorations.	Long	13
2	ENTITLEMENT_SWAP	Entitlement Swap	Note: This field is populated for DNO Users ONLY: Net Capacity Swapped In or Out from a DNO Location for a DNO Flow swap adjustment. The value in this field will be a positive number when it is swapped in and a negative number when it is swapped out. The Entitlement Swap value will be zero unless NG NTS confirms the swap of the Entitlement associated to a DNO Flow Swap.	Long	13

Schema Definition

Name of file: **exapientitlementreportresponse.xsd**

```
<?xml version="1.0" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="EntitlementReportRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name="EntitlementReportResponse" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT_TYPE" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="100"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="24"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DETAILS" minOccurs="1" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GAS_DAY" type="xs:date" minOccurs="1" maxOccurs="1"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:element name="BA_CODE" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="3"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="NET_CAPACITY" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="NET_FIRM" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="ORIGINAL_OFFPEAK" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="NET_SCALED_OFFPEAK" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="ENTITLEMENT_SWAP" minOccurs="1" maxOccurs="1" type="xs:long"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.3.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Table 1 - API Specific Error Messages

Error Code	Error Message
NEX_API_ERROR_008	Period From Date should be less than or equal to Period To Date
NEX_API_ERROR_0010	Period From Date Format Invalid
NEX_API_ERROR_0011	Period To Date Format Invalid
NEX_API_ERROR_0018	Invalid Product Type

For more information relating to generic error messages, refer to the Gemini NTS Exit API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (e.g. to improve clarity).

3.2.4 Max Min Price Information

3.2.4.1 Overview

This specification contains the interface details (eg relevant URLs, request and response XML message formats, specific error messages) for the Max / Min Price Information – Daily Auction API. For more general guidance on API function and usage, refer to the Gemini NTS Exit API Usage Guidelines.

The Max / Min Price Information – Daily Auction API will provide the Maximum and Minimum accepted Price among the allocated requests for every location and Sub Transaction Period of a daily auction.

The Max / Min Price Information – Daily Auction API can be accessed by:

- Shippers
- Distribution Network Operators (DNOs).

3.2.4.2 API URLs

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/ exit/controllers/ExMaxMinPriceInfoReportControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/ exit/api/schema/exapimaxminpriceinforequest.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/ exit/api/schema/exapimaxminpriceinforesponse.xsd

3.2.4.3 XML Specifications

3.2.4.3.1 API Request

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length	Mand- atory
0	MaxMinPriceInfoQry	Top-level hierarchy for query elements.				
1	MOS	Method of Sale	Method of Sale name. Only MoS for Short Term auctions are valid.	String	20	Yes

1	TX_STRT_DT	Transaction Period	Transaction Period Start Date Information may be requested for only one Transaction Period.	String	10	Yes
1	TX_END_DT	Transaction Period	Transaction Period End Date Information may be requested for only one Transaction Period. Date should be in the format YYYY-MM-DD.	String	10	Yes
1	PERIOD_FROM	Period From	The start date from which the details will be queried	String	10	Yes
1	PERIOD_TO	Period To	The end date until which the details will be queried	String	10	Yes
1	LCTNS	Top-level hierarchy for Location element.				
2	LCTN	Location	Location Code may be input for one or All locations. To query all Locations, this element value should be set to 'ALL'. To fetch data related to an individual Location, the Location Code should be entered.	String	20	Yes

Schema Definition

Name of file: **exapimaxminpriceinforequest.xsd**

```

<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="MaxMinPriceInfoQry">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="MOS" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" maxOccurs="unbounded">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.4.3.2 API Response

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length
0	MaxMinPriceInfoRes		Top-level hierarchy for output elements.		
1	METADATA		Top-level hierarchy for meta information elements.		
2	TMSTMP		Timestamp of API access.	DateTime	19
1	MaxMinPriceInfoQry		Top-level hierarchy for query elements.		
1	HEADER		Top-level hierarchy for header fields.		
2	PRODUCT	Product	Product for which bids are queried.	String	100
2	MOS	Method of Sale	Method of Sale name. Only MoS for Daily Auctions are valid.	String	20

2	TX_STRT_DT	Transaction Period	Information will be retrieved for the given Transaction Period Start Date. This date should be in the format YYYY-MM-DD.	String	10
2	TX_END_DT	Transaction Period	Information will be retrieved for the given Transaction Period End Date. This date should be in the format YYYY-MM-DD.	String	10
1	DETAIL	Top level hierarchy for record fields.			
2	LCTN	Location	The NTS Exit Point for which the data is requested.	String	20
2	SUB_TX_PERIOD	Sub Transaction Period	The sub period within which the Daily Auctions can occur for the instance of the MoS. This date should be in the format YYYY-MM-DD to YYYY-MM-DD.	String	24
2	MAX_ACC_PRC	Max Accepted Price	The 'Maximum Accepted Price' by National Grid NTS for a request when the auction type is 'SELL' Or The 'Maximum Accepted Price' by National Grid NTS for an offer when the auction type is 'BUY'. This field will be populated irrespective of whether the auction type is 'SELL' or 'BUY'.	Number (6,4)	7
2	MIN_ACC_PRC	Min Accepted Price	The 'Minimum Accepted Price' by National Grid NTS for a request when the auction type is 'SELL' Or The 'Minimum Accepted Price' by National Grid NTS for an offer when the auction type is 'BUY'. This field will be populated irrespective of whether the auction type is 'SELL' or 'BUY'.	Number (6,4)	7
2	QTY_ALL_MAX_PRC	Quantity Allocated at Max Price	The quantity allocated at Max Price for a request when the auction type is 'SELL' Or The quantity allocated at Max Price for an offer when the auction type is 'BUY'. This field will be populated irrespective of whether the auction type is 'SELL' or 'BUY'.	Long	13

2	QTY_ALL_MIN_PRICE	Quantity Allocated at Min Price	The quantity allocated at Min Price for a request when the auction type is 'SELL' Or The quantity allocated at Min Price for an offer when the auction type is 'BUY'. This field will be populated irrespective of whether the auction type is 'SELL' or 'BUY'.	Long	13
---	-------------------	---------------------------------	--	------	----

Schema Definition

Name of file: **exapiresponse.xsd**

```
<?xml version="1.0" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="MaxMinPriceInfoRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name="MaxMinPriceInfoResponse" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="100"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="MOS" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="24"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="DETAILS" minOccurs="1" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
```

```

<xs:element name="LCTN" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="SUB_TX_PERIOD" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="24"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="MAX_ACC_PRC" minOccurs="1" maxOccurs="1" type="xs:float"/>
<xs:element name="MIN_ACC_PRC" minOccurs="1" maxOccurs="1" type="xs:float"/>
<xs:element name="QTY_ALL_MAX_PRC" minOccurs="1" maxOccurs="1" type="xs:long"/>
<xs:element name="QTY_ALL_MIN_PRC" minOccurs="1" maxOccurs="1" type="xs:long"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.4.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Table 1 - API Specific Error Messages

Error Code	Error Message
NEX_API_ERROR_0017	Invalid MoS Name
NEX_API_ERROR_0006	Only Daily Auctions are valid
NEX_API_ERROR_0014	Transaction Start Date Format Invalid
NEX_API_ERROR_0015	Transaction End Date Format Invalid
NEX_API_ERROR_0016	Transaction Start Date should be less than or equal to Transaction End Date
NEX_API_ERROR_0010	Period From Date Format Invalid
NEX_API_ERROR_0011	Period To Date Format Invalid
NEX_API_ERROR_0008	Period From Date should be less than or equal to Period To Date
NEX_API_ERROR_0009	Period From and Period To dates should be within Transaction Period
NEX_API_ERROR_0013	No active short term MoS instance exists for the transaction period requested

For more information relating to generic error messages, refer to the Gemini NTS Exit API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (eg to improve clarity).

3.2.5 *Sold Unsold Daily Auction*

3.2.5.1 *Overview*

This specification contains the interface details (eg relevant URLs, request and response XML message formats, specific error messages) for the Sold / Unsold – Daily Auction API. For more general guidance on API function and usage, refer to the Gemini NTS Exit API Usage Guidelines.

The Sold / Unsold – Daily Auction API provides the details of capacity Sold and Unsold at every Location and for a Sub Transaction Period of a daily auction.

The Sold / Unsold – Daily Auction API can be accessed by:

- Shippers
- Distribution Network Operators (DNOs).

3.2.5.2 *API URLs*

All URLs are expressed relative to the root URL for the API service. BAs are advised to parameterise URLs to minimise the impact of change.

URL to Access the API

API clients must invoke this URL to access this API's functionality:

/ exit/controllers/ExSoldUnsoldReportControllerAPI/

URL for Request XSD

The XSD found at this URL can be used to validate the request XML format:

/ exit/api/schema/exapisoldunsoldreportrequest.xsd

URL for Response XSD

The XSD found at this URL can be used to validate the response XML format:

/ exit/api/schema/exapisoldunsoldreportresponse.xsd

3.2.5.3 *XML Specifications*

3.2.5.3.1 *API Request*

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length	Mand- atory
0	SoldUnsoldReportQry	Top-level hierarchy for query elements.				

1	MOS	Method of Sale	Method of Sale name. Only MoS for Short Term auctions are valid.	String	20	Yes
1	TX_STRT_DT	Transaction Period	Transaction Period Start Date Information may be requested for only one Transaction Period.	String	10	Yes
1	TX_END_DT	Transaction Period	Transaction Period End Date Information may be requested for only one Transaction Period.	String	10	Yes
1	PERIOD_FROM	Period From	The start date from which the details will be queried	String	10	Yes
1	PERIOD_TO	Period To	The end date until which the details will be queried	String	10	Yes
1	LCTNS	Top-level hierarchy for Location element.				
2	LCTN	Location	Location Code may be input for one or All locations. To query for all locations, this element value should be set to 'ALL' or enter the individual Location Code to fetch data related to a Location.	String	20	Yes

Schema Definition

Name of file: **exapisoldunsoldreportrequest.xsd**

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SoldUnsoldReportQry">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MOS" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="10"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">

```

```

<xs:maxLength value="10"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="PERIOD_FROM" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="PERIOD_TO" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="LCTNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" maxOccurs="unbounded">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.5.3.2 API Response

Element Table

Hier- archy	Data Element	Screen Label	Description	Data Type	Data Length
0	SoldUnsoldReportRes	Top-level hierarchy for output elements.			
1	METADATA	Top-level hierarchy for meta information elements.			
2	TMSTMP		Timestamp of API access.	DateTime	19
1	SoldUnsoldReportQry	Top-level hierarchy for query elements.			
1	HEADER	Top-level hierarchy for header fields.			
2	PRODUCT	Product	Product for which bids are queried.	String	100

2	MOS	Method of Sale	Method of Sale name. Only MoS for Daily Auctions are valid.	String	20
2	TX_STRT_DT	Transaction Period	Information will be retrieved for the provided Transaction Period Start Date. The date format should be YYYY-MM-DD.	String	10
2	TX_END_DT	Transaction Period	Information will be retrieved for the provided Transaction Period End Date. The date format should be YYYY-MM-DD.	String	10
1	DETAIL	Top level hierarchy for record fields.			
2	LCTN	Location	The NTS Exit Point for which the data is requested.	String	20
2	SUB_TX_PERIOD	Sub Transaction Period	The sub period within which the Daily Auctions can occur for the instance of the MoS. The date format should be YYYY-MM-DD.	String	24
2	QTY_OFFERED	Quantity Offered	The Capacity which is made available for Processing, in kWh. This field will be populated only when the auction type is 'SELL'.	Long	13
2	QTY_REQUESTED	Quantity Requested	This field will show values for those requests which are either in New, Allocated or Rejected Status (but not Withdrawn) for the selected MoS Instance / Location / STP, in kWh. This field will be populated irrespective of the auction type being 'SELL' or 'BUY'.	Long	13
2	QTY_SOLD	Quantity Sold	Capacity sold for the selected MoS Instance / Location / STP, in kWh. This field will be populated only when the auction type is 'SELL'.	Long	13

2	QTY_UN SOLD	Quantity Unsold	Unsold capacity for the selected MoS Instance / Location / STP, in kWh. This field will be populated only when the auction type is 'SELL'.	Long	13
2	QTY_BOUGHT_BACK	Quantity Bought Back	Capacity bought back for the selected MoS Instance / Location / STP, in kWh. This field will be populated only when the auction type is 'BUY'.	Long	13
2	REVENUE	Revenue	Revenue for the MoS Instance	Long	13
2	COST	Cost	Cost for the Capacity Bought Back	Long	13

Schema Definition

Name of file: **exapisoldunsoldreportresponse.xsd**

```
<?xml version="1.0" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="SoldUnsoldReportRes">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="TMSTMP" type="xs:dateTime"/>
        <xs:element name="SoldUnsoldResponse" minOccurs="0" maxOccurs="1">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PRODUCT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="100"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="MOS" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="TX_STRT_DT" minOccurs="1" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="10"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

<xs:element name="TX_END_DT" minOccurs="1" maxOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DETAILS" minOccurs="1" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="LCTN" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="SUB_TX_PERIOD" minOccurs="1" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="24"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="QTY_OFFERED" minOccurs="0" maxOccurs="1" type="xs:long"/>
      <xs:element name="QTY_REQUESTED" minOccurs="0" maxOccurs="1" type="xs:long"/>
      <xs:element name="QTY_SOLD" minOccurs="0" maxOccurs="1" type="xs:long"/>
      <xs:element name="QTY_UNSOLD" minOccurs="0" maxOccurs="1" type="xs:long"/>
      <xs:element name="REVENUE" minOccurs="0" maxOccurs="1" type="xs:long"/>
      <xs:element name="COST" minOccurs="0" maxOccurs="1" type="xs:long"/>
      <xs:element name="QTY_BOUGHT_BACK" minOccurs="0" maxOccurs="1" type="xs:long"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

3.2.5.4 API Specific Error Messages

In addition to any generic error messages, this API can return the following specific error messages:

Table 1 - API Specific Error Messages

Error Code	Error Message
NEX_API_ERROR_0017	Invalid MoS Name
NEX_API_ERROR_0006	Only Daily Auctions are valid
NEX_API_ERROR_0014	Transaction Start Date Format Invalid

NEX_API_ERROR_0015	Transaction End Date Format Invalid
NEX_API_ERROR_0016	Transaction Start Date should be less than or equal to Transaction End Date
NEX_API_ERROR_0010	Period From Date Format Invalid
NEX_API_ERROR_0011	Period To Date Format Invalid
NEX_API_ERROR_0008	Period From Date should be less than or equal to Period To Date
NEX_API_ERROR_0009	Period From and Period To dates should be within Transaction Period
NEX_API_ERROR_0013	No active short term MoS instance exists for the transaction period requested

For more information relating to generic error messages, refer to the Gemini NTS Exit API Usage Guidelines.

Note: although message codes are fixed, message descriptions may be changed without formal notification (eg to improve clarity).

Version History

Version	Status	Date	Author	Summary of changes
0.1	For Review	21-OCT-2016	Wipro	
1.0	Approved	27-03-2017	Wipro	