

# **Code Subsidiary Document**

**No. 0405:**

**Data Query Interface**

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## Definitions

Unless expressly stated otherwise, for the purposes of this CSD:

- (a) terms defined in the Wholesale-Retail Code Part 1 (Objectives, Principles and Definitions) shall apply;
- (b) capitalised terms relating to the titles of Data Items or Data Transactions described in CSD 0301 (Data Catalogue) shall have the meaning attributed therein; and
- (c) capitalised terms relating to definitions set out in CSD 0400 (Common interface technical specifications) shall also apply.

# 1. Introduction

## 1.1 Purpose and scope

1.1.1 This CSD defines the interface that enables Trading Parties to perform queries against data that is held within the Central Systems and also sets out the key requirements for the Market Operator and Trading Parties wishing to use this interface.

1.1.2 Common technical specifications and standards are described in CSD 0400 (Common interface technical specifications).

## 1.2 Structure of this CSD

1.2.1 This CSD is structured as follows:

- (a) Section 1: Purpose and scope – this section:
- (b) Section 2: Description of the interface – describes the interface in terms of the functions available to Trading Parties; and
- (c) Section 3: Technical specification and standards – describes the technical specifications specific to this interface.

## 2. Description of the interface

### 2.1 Overview

- 2.1.1 The interface will enable users to view and query data held on the Central Systems.
- 2.1.2 The interface will allow users to perform basic and more complex data queries based on configurable parameters.
- 2.1.3 Users will be able to save data query results and re-use in the future if further analysis of the data is required.
- 2.1.4 The interface will include Role Based Access Control which will enable Trading Parties and the Market Operator to allocate appropriate privileges to individual users based on their role within their organisation. Trading Parties will appoint an Administrator to manage all user access within their organisation.
- 2.1.5 The data sets queried through this interface will be a snap shot of the data held by the Central Systems. Recently processed Data Transactions may take up to one (1) hour to be reflected in data query results.
- 2.1.6 The interface will allow users to download data query results for further analysis in CSV format.
- 2.1.7 Mandatory Cryptographic Protections include Mutual Authentication. The Market Operator will perform a series of access control checks including Authentication of a Trading Party's organisation Digital Certificate to ensure all Sessions established through the interface are secure.

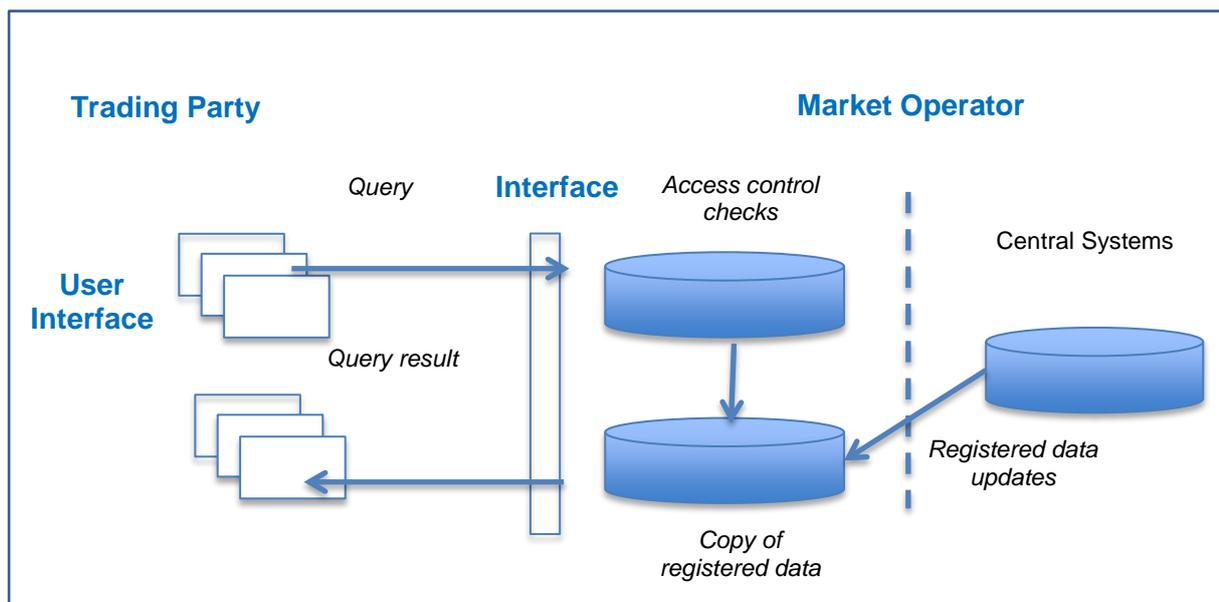


Figure 1: Interface operation concept

## 2.2 User privileges

2.2.1 User access privileges will be set by a Trading Party Administrator restricting a user's access to different data types such as Tariff data, standing data, meter reads.

## 2.3 User authorisation

2.3.1 Each user of the interface will be able to access specific functions based on their specific user role and Trading Party privileges.

2.3.2 Any attempts to access the interface and/or obtain reports using either invalid user or Trading Party credentials will not be permitted.

## 2.4 Configurability

2.4.1 The interface will be configurable and allow users to save their individual configurations for a subsequent Session within the constraints of the privileges set by the Trading Party's Administrator and the overall access privileges of their Trading Party which is controlled by the Market Operator.

2.4.2 Users can accept default parameters, define their own parameters or reset any parameters before each query.

## 2.5 Queries

2.5.1 The interface will allow users to begin with a basic query on one table and progress to more complex queries of other tables using the data query results from the first table based on the adjustment of configurable parameters such as:

- (a) the Effective From Date; and
- (b) the Effective To Date.

2.5.2 Simple comparative data queries will be grouped into two distinct types as follows:

- (a) simple queries against a data table;
  - (i) the interface will allow users to query a data table based on any of the Data Items in the table. For example, the ability to query the SPID table to display SPIDs within a common Wholesaler Area or to display SPIDs within a range of Effective From Dates; and
- (b) data grouping:
  - (i) the interface will allow users to perform a logical combination of search queries with a combination of attributes e.g. display SPIDs within a given Wholesaler area and within a range of Effective From Dates.

2.5.3 The interface will provide users with the following tools to aid on-screen analysis:

- (a) data scroll; and
- (b) data filtering based on configurable parameters which can be determined by each user.

## 2.6 Query results

2.6.1 Results will be presented by the interface in a logical tabular format that users can easily analyse on screen and shall enable users to filter the results by refining the query.

2.6.2 The interface will allow users to perform further and possibly more complex analysis with different configurable parameters to refine the query.

- 2.6.3 The interface will provide users with the ability to construct further data queries on a given data set whilst retaining the initial results.
- 2.6.4 Data query results will be displayed in the form of a result set and set out in an appropriate format based on:
- (a) the complexity of the query; and
  - (b) the volume of data presented.
- 2.6.5 The interface will allow users to save results and use those to build new queries with different configurable parameters.
- 2.6.6 The interface will allow users to save configurable data search criteria for use in a subsequent Session based on their user log in credentials.

## **2.7 Data extract**

- 2.7.1 The interface will allow users to select data from query results for download in CSV format.
- 2.7.2 Any data manipulation will be undertaken within a Trading Party's own systems based on reports obtained through the reporting interface CSD 0403 (Interface for the provision of Reports from the Market Operator to Trading Parties).

## **2.8 Reporting**

- 2.8.1 Where a Trading Party requires data in a specific report format on-going, the relevant data will need to be obtained through the reporting interface as set out in CSD 0403 (Interface for the provision of Reports from the Market Operator to Trading Parties) and further analysis undertaken by whatever means within the Trading Party's own systems.

## **3. Technical specification and standards**

### **3.1 Common requirements**

3.1.1 Trading Parties must configure access and ensure correct use of the interface in accordance with the requirements set out in CSD 0400 (Common interface technical specifications).

### **3.2 Data sources**

3.2.1 The Market Operator will ensure that the processing of data queries does not impact on the operation of the Market Operator Systems and other interfaces.

3.2.2 Queries will not be run against the Central Systems. Instead, snapshots of data will be held in a separate secure environment which will be kept up to date by the Market Operator, and all data queries will be run against this data set.

3.2.3 The time lag between the data snapshot and the information held on the Central Systems will not exceed one (1) hour during a Business Day or Extended Hours.

### **3.3 Query response**

3.3.1 Depending on the complexity of a query, the interface will provide users with either a synchronous response or a meaningful on-screen status whilst a query is being processed.

3.3.2 For more complex queries, users will be able to select to receive an email notification when a query has completed.

3.3.3 User queries will be stateless, allowing a user to resubmit a query without retry constraints.

### **3.4 Data Access Control**

3.4.1 Robust data access controls will be enforced to ensure that the data and/or options presented to a user when constructing a data query are subject to the following data access rules:

- (a) Wholesalers have access to market data relating to their Wholesale Area (with the exception of Billing Address data for Non-Household Customers);

- (b) Wholesalers have access to the data as set out in part (a) above of another Wholesaler’s Area where such Wholesaler has notified the Market Operator of such an agreement, as set out in the Market Terms and CSD 0006 (Trading Party Administration and Notification Processes); and
- (c) Retailers have access to market data relating to all Wholesale Areas (with the exception of Billing Address data for Non-Household Customers Registered to other Retailers).

### 3.5 Data extracts

3.5.1 The interface will allow users to select and download query results in CSV file format.

### 3.6 Error handling

3.6.1 Common error handling requirements are described in CSD 0400 (Common interface technical specifications).

3.6.2 The following table sets out possible error scenarios and outcomes specific to this Interface.

Error	Outcome
Interface User identification / password invalid	Interface user is notified that their user identification and/or password are invalid, and is advised to contact their Administrator in the first instance before raising a service management incident as set out in CSD 0406 (Service Management Interface)

Table 1: Interface specific error scenarios