

OneGov -FuelCheck - Application Programming Interface Technical Documentation

**Version 1.0
9 Jun 2016**



Contents

1	About this document.....	3
1.1	Introduction	3
1.2	Purpose of this document.....	3
2	FuelCheck.....	3
2.1	Registering with FuelCheck.....	4
2.2	When will FuelCheck be operational?	4
2.3	Submitting prices to FuelCheck	4
2.4	Fuel prices must match	4
2.5	Various channels to update fuel prices	5
3	Definition of Services.....	6
3.1	Get Reference Data	7
3.2	Grant Client Credentials	8
3.3	Update Price	9
4	Frequently Asked Questions – API's.....	10

1 About this document

1.1 Introduction

FuelCheck will be a freely available NSW Government website that publishes the standard retail prices of all prescribed fuels sold at every service station in NSW. The Fuel Check API's (Application Programming Interface) have been developed as an accessible interface for fuel retailers to bulk upload fuel. Some have also been developed to allow access of FuelCheck data for commercial organisations, to assist sharing information with the public using the web application in a time efficient manner.

It is envisaged that these API's will be used by the major fuel retailers to provide close to real time fuel price updates, multiple times during the day.

1.2 Purpose of this document

This document provides information around using the FuelCheck Bulk Upload Channel API's. The document covers adding and amending information on a stations' current fuel prices within the FuelCheck system. It is structured in such a way that the first sections provide more non-technical explanations of the API with frequently asked questions targeted at business users followed by a more technically focused section at the end to enable the development of the customer systems to use the API's.

2 FuelCheck

FuelCheck is an online tool designed to provide consumers with real-time information about fuel prices at every service station across NSW. FuelCheck is a mobile responsive web application that will be accessible on a smartphone, tablet or desktop device that is connected to the internet.

FuelCheck will enable NSW motorists and citizens to:

- find the cheapest fuel being sold anywhere in NSW
- get directions to any service station
- search for fuel by type (E10, Regular, LPG, etc) or brand
- submit a complaint to NSW Fair Trading if the price at the pump doesn't match what is shown on FuelCheck.

2.1 Registering with FuelCheck

The legislation requires that all operators of service stations in NSW must register with FuelCheck by 14 July 2016. There is no charge to register or to update fuel prices once FuelCheck is operational.

To register with FuelCheck, operators are required to provide:

- contact details for the person responsible for setting retail fuel prices
- the location of the service station
- details about the types of fuel available.

Service station operators can provide this information using an online form or an excel spreadsheet. For more information, visit the [Service station data collection webpage](#).

Penalties may apply for operators who have not completed registration by this date. Any service stations that open or change owner after the initial registration period will need to have an account created. Operators in this category should contact Fair Trading on fuelsurveyresponses@finance.nsw.gov.au

2.2 When will FuelCheck be operational?

Registered service stations will be contacted in early July 2016 with information about how to access FuelCheck and set up their account. Free training material will be made available on the NSW Fair Trading website at the end of June 2016.

It is currently expected that FuelCheck will be up and running by the end of July 2016.

2.3 Submitting prices to FuelCheck

Service station operators can submit their fuel prices to FuelCheck through the FuelCheck website or by using a web application programming interface (API).

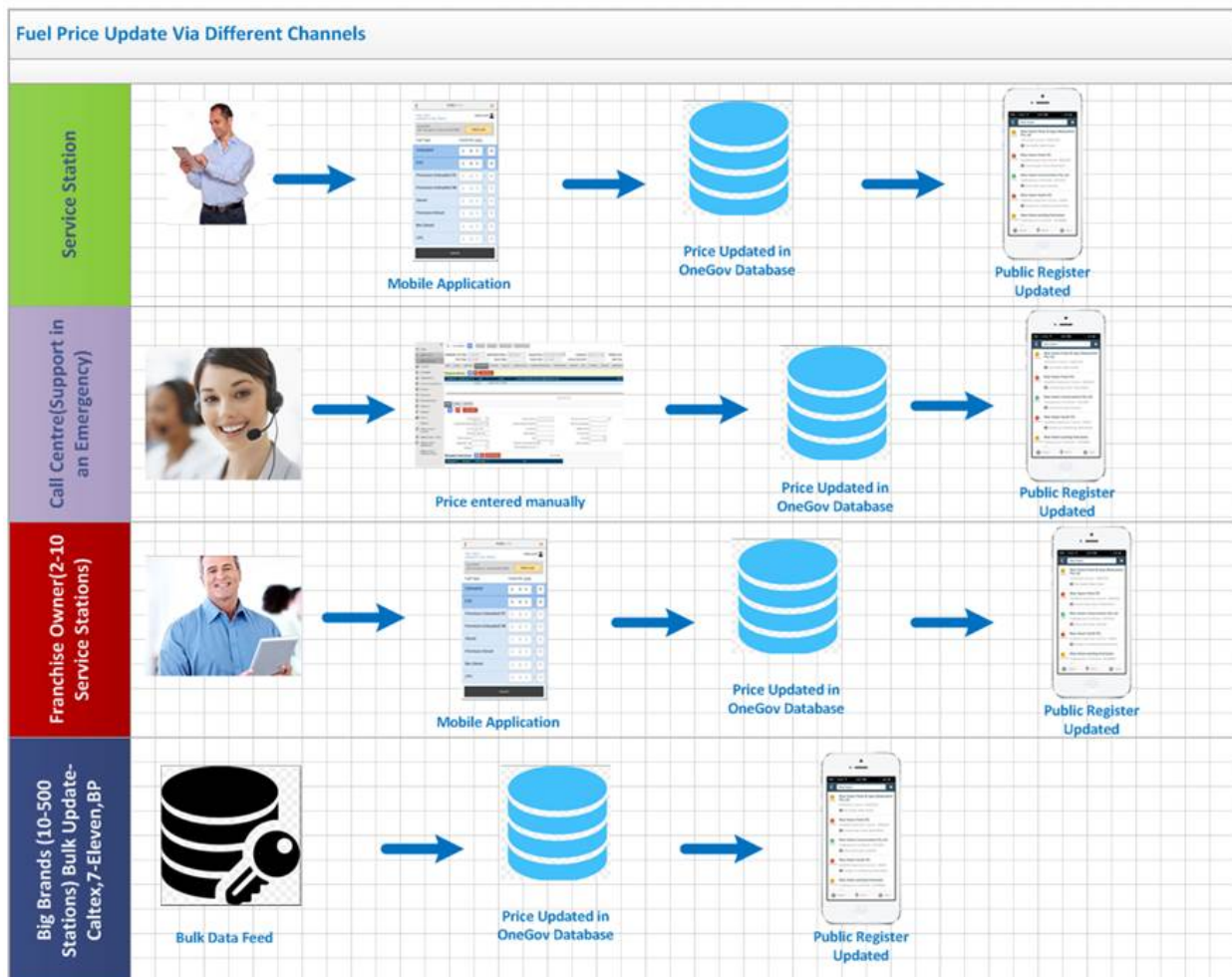
2.4 Fuel prices must match

At any given time, service station operators will need to ensure the price of a fuel in FuelCheck matches the standard price of the fuel at their service station. The standard price is the price per litre at which the fuel is available to retail customers without any discounts or special offers (e.g. 'shopper docket').

There may be occasions where the price on FuelCheck does not match that which is shown on a physical price board or bowser, due to reasons outside of the service station's control. For example, the FuelCheck website or API may be offline, the service station may not be able to connect to the internet to register a price update, or there could be an issue with the device being used to access FuelCheck.

If consumers notice a price difference they will be encouraged to raise this issue with the service station operator. It will be possible for consumers to lodge a complaint with NSW Fair Trading directly via FuelCheck regarding instances of fuel price mismatch. Fair Trading will review each complaint and depending on the circumstances the service station may be fined for non-compliance. Penalty notices of \$550 can be issued for each offence.

2.5 Various channels to update fuel prices



Service station (mobile): Operators can easily access the website through their PC, desktop, tablet or a smartphone to login and update prices. This option makes it easier for the price to be update into Fuel Check application at the time same time when the price is changing at the register, fuel bowser and advertised on signage at the service station. Public facing Fuel Check website will be updated instantaneously.

Call centre (support in an emergency): If there is significant emergency (e.g. Telstra cables are cut) where no access to the internet or cannot login using your existing credentials, you will be provided with a number to call to update your details.

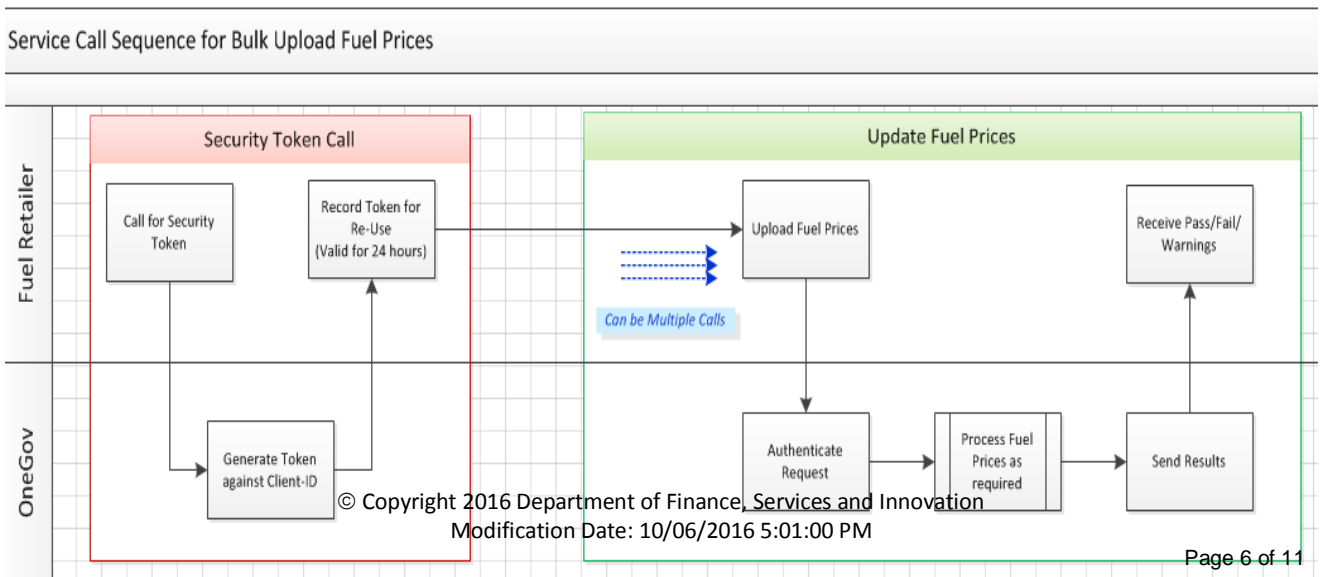
Franchise owner (optimal for 2-10 service stations): The mobile application (and website) is set up to allow an owner or manager responsible for many stations with the ability to quickly update one or more station prices. The application will allow you to select the various stores associated with your login and from there you can set individual prices or change more than one at a time.

Bulk updates (optimal for 10 to 500 service stations): This allows a retailer to provide close to real time fuel price information for any number of service stations and fuel types by making a Web API call. Fuel price information is updated in the data system and displayed to the Public facing web application. This solution is based on three API's that have been developed. The following sections of this document go into more detail on this channel.

3 Definition of services

There are three API's available to be used.

1. **Get Reference Data**– this is a common API built for Fuel Retailer using the bulk channel and commercial organisation that need access to Fuel price data to run their public facing apps. The field mainly used for bulk upload is the call API to get latest “fueltypes” and have a mapping done on your side if you have fuel types know by different names. We do not expect the fuel types to change very often. The other fields such as brands, service stations, location types, and trend periods are built for commercial organisations running apps using FuelCheck data.
2. **Grant Client Credentials** – this function will enable the request of an access token using only client credentials (or other supported means of authentication) when the client is requesting access to the protected resources under its control, or those of another resource owner that have been previously arranged with the authorisation server.
3. **Update Price** – to change one or more fuel prices, for any number of service stations using the Service station ID generated by OneGov. This will also allow you to set fuel types that are sold out as well as ‘turn off’ all pumps (e.g. the station is closed for renovations). In this example you would simply set the value of ‘isavailable’ to false.



3.1 Get Reference Data

UAT URI	https://<address>/fuel/lovs (To be provided during the testing phase)			
PROD URI	https://<address>/fuel/lovs (To be provided during the testing phase)			
Method	GET			
Objective	Returns lists of reference data to be used in subsequent requests.			
Request Header				
Fields			Data Type	Description
apikey			string	Unique key assigned to consumer organisation by OneGov.
transactionid			string	Unique ID of this call
requesttimestamp			dateTime	UTC date and time of request. Format "dd/MM/yyyy hh:mm:ss AM/PM"
if-modified-since			dateTime	UTC date and time for comparison with the modification date of the data. The response will be empty if no changes have been made to the reference data since this timestamp, otherwise all reference data will be returned.
Response Header				
Fields			Data Type	Description
transactionid			string	Unique ID of this call. Copied from request header
requesttimestamp			dateTime	The UTC Date Time of the request made. Copied from request header . "dd/MM/yyyy hh:mm:ss AM/PM"
responsetimestam p			dateTime	The UTC Date Time of the response; "dd/MM/yyyy hh:mm:ss AM/PM"
last-modified			dateTime	The UTC date and time of the most recent modification to the reference data
Response – 200 Success				
Fields			Data Type	Description
brands				structure containing the list of brands
	items[]			
		code	string	brand code;eg "cal"
		name	string	brand description; eg "Caltex"
fueltypes				structure containing list of fuel types
	items[]			
		code	string	Fuel type code;eg "P95"
		name	string	Fuel type description; eg "Premium 95"
stations				structure containing list of stations
	items[]			
		code	string	station code
		brand	string	brand of fuel sold at this station
		name	string	station description; eg. "Caltex artarmon"
		address	string	the address of the station
		location		structure containing geographic coordinates of the service station
			latitude	decimal, nullable Latitude
			longitude	decimal, nullable Longitude
locationtypes				Structure containing the list of location types that can be specified for location-based queries
	items[]			
		type	string	Location type, eg "Suburb" "Postcode" & "Coordinates"
trendperiods				Structure containing the list of periods for which price trend data are available
	items[]			
		period	string	Period name, eg "Week"
		description	string	Description of the period, eg "Last seven days"
sortfields				structure containing list of sort fields to be used in GetFuelPrices
	items[]			
		code	string	sort field code
		name	string	sort field desc
Response – 500 Internal Server error				
Fields			Data Type	Description
errordetails				Structure containing error details
	code		string	error code
	description		string	error description

3.2 Grant Client Credentials

URL	http://<addr>/oauth/client_credential/accesstoken?grant_type=client_credentials (To be provided during the testing phase)		
Method	POST		
Objective	The client can request an access token using only its client credentials (or other supported means of authentication) when the client is requesting access to the protected resources under its control, or those of another resource owner that have been previously arranged with the authorisation server. This request is only required to perform the price update request.		
Request Header			
Fields		Data Type	Description
authorisation		string	Bit64 encoded value of User ID & password. Eg "Basic C61ANNB1twAABEJvq8"
Request Body			
No fields in the request body			
Response Header			
There is no distinct response header for this request			
Response – 200 Success			
Fields		Data Type	Description
issued_at		string	The date the access token is issued
application_Name		string	Unique application ID in Apigee
Scope		string	shows if we can perform read, write and delete operations; "Read/Write"
status		string	Approved/rejected
api_product_list		string	The name of the product under which the API key is present
expires_in		string	The number of seconds in which the token expires
Developer_email		string	Email address of contact person making this request
Token_type		string	The token type associated with the request; "Bearer token"
client_id		string	Key associated with the user; "CH#\$&(*&DFDFJLKJLKS#(*080423"
access_token		string	This is the most important field in the response body as the value of this needs to be inserted into the header of every OFS Certificate REST API call
organization_name		string	Name of the organisation making the request.
refresh_token_expires_in			Never used
refresh_count			Never used
Response – 401 Unauthorised			
Fields		Data Type	Description
Error_code		String	Error code eg "Invalid Client"
Error		string	Error message eg. "Client identifier is invalid"
Response – 500 Internal Server Error			
Fields		Data Type	Description
errordetails			Structure containing error details
	code	string	error code
	description	string	error description

3.3 Update Price

UAT URI	https://<address>/fuel/prices/update (To be provided during the testing phase)		
PROD URI	https://<address>/fuel/prices/update (To be provided during the testing phase)		
Method	POST		
Objective	Submits one or more fuel price changes for a specific service station		
Request Header			
Fields		Data Type	Description
authorisation		string	Contains the access token returned from the "Grant Client Credentials" request. The value access token needs to be prefixed by "Bearer ". Eg. "Bearer C61ANNB1twAABEJvq8"
apikey		string	Unique key assigned to consumer organisation by OneGov.
userid		string	The userid of the consumer system
transactionid		string	Unique ID of this call
userlocation		string	Location of the requestor (IP address or geographic coordinates to be decided)
requestTimeStamp		dateTime	UTC Time of request "dd/MM/yyyy hh:mm:ss AM/PM"
Request Body			
Fields		Data Type	Description
stations[]			Structure containing fuel prices for one or more service stations
	identifier	string	Identifies the service station The service station identifier is assigned by OneGov on behalf of Fair Trading
	fuelprices[]		structure containing 1 or more fuel prices for this service station
	isavailable	boolean	Set to true if fuel type is currently available or false if fuel type is currently unavailable. If the fuel type is marked as available then a price is required.
	fueltype	string	Fuel type code. Refer to "Get Reference Data" for permitted values.
	price	decimal	Price of this fuel in cents per litre "109.9"
Response - Header			
Fields		Data Type	Description
transactionid		string	Unique ID of this call. Copied from request header
requesttimestamp		dateTime	The UTC Date Time of the request made. Copied from request header . "dd/MM/yyyy hh:mm:ss AM/PM"
responsetimestamp		dateTime	The UTC Date Time of the response; "dd/MM/yyyy hh:mm:ss AM/PM"
Response - 200 Success			
warnings[]			Structure containing 1 or more warnings
			W0001 Price change for {fueltype) is suspect. Exceeds permissible range
	code	string	Warning code eg "W0001"
	description	string	Warning message, eg "Warning: Price for fuel type "P95", has varied by more than 50%"
Response - 400 Bad Request			
Fields			Fields
errordetails[]			Structure containing 1 or more error details
			E0001 Service station {Identifier} - Either the identifier is invalid, or you are not authorised to update prices
			E0002 Invalid fuelType {fueltype}
	code	string	Error code eg "E0002"
	description	string	Error description eg "Invalid fuelType ZZZ"
errordetails[]			Structure containing 1 or more error details
			E0001 Service station {Identifier} - Either the identifier is invalid, or you are not authorised to update prices
Response - 500 Internal Server error			
Fields		Data Type	Description
errorDetails[]			Structure containing error details
	code	string	error code
	description	string	error description

4 Frequently Asked Questions – API's

How many fuel price updates I can do using a single API call?

Updates can be made to any number of fuel prices, for any number of fuel types belonging to any number of service stations. All of the updates can be made using one API call.

Can I update only some of my stations at a time?

Yes, the API will allow you to update any number of the stations you have permission to update.

Do I need to send prices that are changing or all prices for service stations?

You can send only the prices that are changing.

What if a fuel type is temporarily unavailable at a service station?

In the API there is an 'isavailable' field. This has a Boolean data type. Simply set this value to false if you are sold out, or true if you have the type in stock and available to sell. If for any reason your station is closed outside of normal hours (i.e. emergency or renovations) you can set all your fuel types availability to false (is no available).

What if a service station is temporarily closed for renovation?

In the API there is an 'isavailable' field. If for any reason your station is temporarily closed (i.e. emergency or renovations) you can set all your fuel types availability to false (is no available).

What happens if I update with the wrong price?

It is the responsibility of the retailer to ensure they are adding and displaying correct data, however we have included a validation where if the price variance is more than 50% (plus or minus) a warning message will be returned. If you add a price that is incorrect, then send the correct price as soon as possible after you become aware of this error.

What happens if I don't sell a type of fuel at my station?

Simply set the 'isavailable' field to 'false' when using the Update Fuel Price API. See tables in section 3.3 for more details.

How long after I update a price are customers able to see it displayed for my station on the app?

Once we receive the price information that update to the database is made within seconds and the public web application is refreshed instantaneously.

Who will provide me with an API Key?

OneGov will provide an API key one for the testing phase and one for production. This will be provided close the testing phase.

When will I receive Service Station unique ID for my service stations?

Once the initial registration phase is complete, OneGov will generate a Unique Service Station ID for all registered stations. This will be provided closer to Go-Live date. We will also provide Service Station ID for the test data closer to the testing phase.

When will I receive the URI for API access?

The testing phase is expected to start on the 27th June 2016. You will be provided with URI to access API's before the testing starts.

What are the Fuel Types included for Go-Live?

Fuel Type	Code
Ethanol 94	E94
Ethanol 105	E105
Unleaded 91	U91
Premium 95	P95
Premium 98	P98
Diesel	DL
Premium Diesel	PDL
Biodiesel 20	B20
LPG	LPG
CNG/NGV	CNG
LNG	LNG
EV charge	EV
Hydrogen	H2