GIR

INDUSTRIAL FUEL MANAGEMENT PLATFORM

EQUIPCO®

INNOVATIONS IN FUEL HANDLING

Technical Bulletin – Fleet & Depot Applications

GIR SYSTEM CONFIGURATIONS

Our GIR Systems are engineered for versatility, available in two distinct configurations to suit varying infrastructure requirements:

Retrofit Terminal Interface

Designed for seamless integration with legacy infrastructure, this modular terminal unit interfaces directly with existing pumping mechanisms. While standard industry offerings often cease at this stage, our terminal technology serves as a robust foundation for further system expansion.

Turnkey Integrated Pump Assembly

For operations requiring a comprehensive solution, we offer a fully integrated pump systems. These factory-assembled units ensure optimal synchronisation between the GIR technology and the dispensing hardware, delivering maximum reliability and performance.

TECHNICAL VARIANTS & POWER OPTIONS

We have developed a series of compact, footprint-optimised units designed for cost-efficiency without compromising performance.

- Voltage Compatibility

  Available in 12V, 24V, and 240V configurations to suit mobile and stationary applications.

- Specialised Models

  Includes "Dual Shoe" variants engineered specifically for precision low-flow applications.

TERMINAL HARDWARE OPTIONS: Cloud Hosted Software

There are two terminal configuration options available:

The GIR Terminal WITHOUT GSM modem.

01 With this, the software is free for a single terminal data base and there are no ongoing fees. Data is transferred using LAN CAT5 cable to the cloud software. Some set up fee may be involved for complex systems.

The GIR Terminal WITH GSM modem

02 With this, the software is free for a single terminal data base and there are no ongoing fees. Data is transferred in real time using NBIoT modem to the cloud software. Some set up fee may be involved for complex systems.

In all seriousness, this system compared to every other system is a cut above the rest... and has some VERY handy features.

Configuration	Software Cost	Ongoing Fees	Data Transfer	Setup Fee
Without GSM Modem	Free	None	LAN CAT5 cable	One-time setup fee applies for complex systems.
With GSM Modem	Free	Free for simple single data base set up – Complex shared terminal data base will involve a monthly fee	NBIoT or CATM5 Modem	One-time setup fee applies for complex systems.

GIR SOFTWARE ADVANTAGES AND SPECIFICATIONS

FREE:
Hosting, backups, server patches.

FOR SINGLE TERMINAL USE:
No ongoing fees.

BENEFITS

- Designed for cloud (SaaS) deployment;
- Accessible via any web browser, or free app for iPhone/iPad/Android
- Extremely easy to use
- Customizable reports
- Visual reports: bar graphs, pie charts
- 1-click spreadsheet export
- Built-in API for data integration with fleet and/or finance software app

FEATURES

- GIR hardware unit remote supervision
- List of authorized drivers and vehicles
- Real-time transactions log
- Vehicles odometer and engine hours
- Reporting by driver, vehicle, product, site, department, model, etc.
- Tank inventory management
- Up to 16 products: Diesel, Unleaded, AdBlue, Oils, Biodiesel, Ethanol Blends etc. with pump package upgrade.
- E-mail notifications

ENHANCED FEATURES

- Visual reports: bar graphs, pie charts
- Tank gauge reconciliation
- Additional prompts: job, activity code, etc.
- Telematics interface for automatic odometer collection
- Gate access control

W150&W250 SOFTWARE COMPARISON	W150	W250
Maximum number of vehicles	3K	10K
Maximum number of drivers	3K	10K
Maximum number of sites	50	100
Maximum number of pumps per site	16	16
Read-only login	✓	✓
Login limited to some actions		✓
Login having access limited to part of vehicles / drivers		✓
4-levels hierarchy of vehicles / drivers		✓
Electronic gauging connectivity	✓	✓
Comparison history between theoretical and live tank level	✓	✓
Manual entry of tank level and pump totalizers	✓	✓
Predicted tank level by site or by region		✓
Built-in invoicing		✓
Additional non checked misc entry after identification to refuel	✓	✓
Additional activity code entry after identification to refuel		✓
Km mileage or hour meter (by vehicle's type)	✓	✓
Handling of vehicles having both km mileage and hour meter	✓	✓
Vehicle-based volume quota	✓	✓
Department-based volume or money quota Handling of tank trucks having embedded terminal		✓
Handling of fuel depots, registering input and output flows	✓	✓
Heterogeneous identification among vehicles / drivers	✓	✓
Enhanced vehicle's maintenance schedule		✓
Enhanced gate and door access control		✓
Terminal communication: NB-IoT / 4G option or Ethernet.	✓	✓

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WHAT YOU NEED TO KNOW ABOUT GIR

With over 15,000 outside terminals in operation around the globe, GIR has to be the most trusted fuel and fleet management system.

From the outset in France in 1978, GIR has kept ahead of the IT age and offers features far beyond what is currently conventionally available to the transport industry.

Even the GIR hardware has had some serious thought put into it. Obviously, years of listening to their clients' needs has brought with it an outdoor terminal box second to none. Inside the robust IP66 enclosure is a unique modular system with all components DIN rail-mounted.

Advanced features purpose-built for transport — Smart functionality that goes further than standard industry solutions.

For example, the pump module: this turns the pump on once all the prompts have been followed and correct identification of the driver and his vehicle have been recognised. The GIR outside terminal will facilitate up to 16 such pump modules...yes, off the one terminal.

WHY CHOOSE GIR?
REAL-WORLD SCENARIOS

SCENARIO 1: "My tank is near my office"

"Firstly, if my tank was near my office and I could run a Cat5 LAN cable will this work?

SOLUTION STATEMENT

If your fuel tank is close to your office and you can run a LAN Cat 5 -6 cable, so system talks direct to the cloud giving live transaction data

Solution: Use the W150 installation—software is free, with no recurring charges.

SCENARIO 2: "I want to manage my system from anywhere"

"If I preferred to have a flexible – no fuss setup and simply log onto my terminal via the cloud website, I could manage my system and do my reporting from anywhere in the world.

This would mean my outside terminal would have the latest NBIoT modem with SIM card and would be able to be accessed anytime from anywhere LIVE on the cloud. This online live system utilises the W150 system and comes with no ongoing fees for simple single set up data base.

SOLUTION STATEMENT

If you prefer to log in via a website to manage your system and generate reports from any location:

Solution: Deploy the Cloud-based W150 system with a NBIoT modem and SIM card. Access live data anytime, anywhere.

Cost-saving tip: keep it simple with one database per terminal to access no fees hosting.

SCENARIO 3: "I use a mobile fuel trailer"

"If, for example, I had a mobile fuel trailer which was filled up from a larger tank on my property, I could have a 240 Volt single-phase system on my larger static tank and a 12 Volt system on my trailer tank.

That way when I dispense from the large static tank to the trailer tank.

***Firstly**, the system would recognise this filling as a simple fuel transfer rather than a regular transaction.*

***Secondly**, when I drive around the property and fill my plant in the field from my trailer tank, these fillings can all be recorded and reported on the same screen as the larger static tank recordings."*

SOLUTION STATEMENT

Imagine you have a large static tank (240V single-phase) on your property that fills a mobile 12V fuel trailer.

Solution: How GIR W250 Software manages this.

- When dispensing from the static tank to the trailer, the system logs this as a fuel transfer—not a standard transaction
- When you drive the trailer around the property to refuel equipment in the field, every dispense is recorded
- All transactions—static tank and mobile trailer—appear on the same reporting dashboard for unified visibility

W250 : Software has a set up fees and month subscription for complex demanding applications

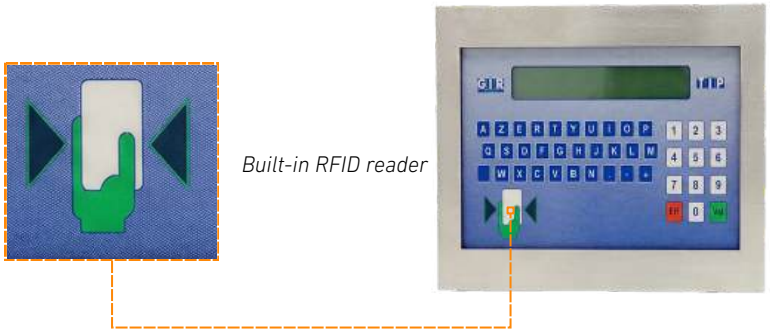
The other brilliant feature about the GIR system is that it can easily integrate with most tank level gauges. Equipco sell the TG2-PRO or TG5-ELITE Level Gauges. These gauges have a readout at the tank, but more importantly integrate with the GIR terminal, allowing live tank level to appear on the website. The added handy tank alerts feature allows you to send email alerts to yourself or even to your fuel supplier, notifying them that they need to come fill the fuel tank shortly. These alerts and levels at which the alerts are triggered are fully customizable.

TG2-PRO *TG5-ELITE*

SMART FUEL CONTROLS & RESTRICTIONS

The many methods that drivers can identify themselves and their vehicles is something only found with GIR technology. A secret PIN number can be attached to each identifying process, further protecting the system against possible theft of fuel. So, a real double-entry system to protect one of your largest consumables: ***your fuel***.

Each outside terminal comes with a built-in RFID reader. Also included in the package are 20 free RFID tags. These tags are allocated to drivers or vehicles or both, and generally with a PIN number attached to the driver's tag so that if the user loses it, no one else can authorise transactions without the PIN number.



Built-in RFID reader

Optional extras are a Magnetic Card Reader or Dallas Key Reader. With the Magnetic Card Reader, any card with a magnetic strip can be used as a form of identification, even fuel cards and credit cards.

Amongst many features, is being able to set the quota of fuel in litres that a particular vehicle can take from the bowser. So, say vehicle ABC has a 100 Litre fuel tank. I can set the quota on the terminal so that the pump will not allow more than 100 Litres when dispensing into vehicle ABC.

On top of this feature, we can also say that if vehicle ABC generally takes a week to use the 100 litres, we can disable the ability to refuel the vehicle for a specified number of days, in this case, say 7 days or 6 to be on the conservative side.

Also, a very useful tool is that we can allocate certain vehicles to a driver. What this means is that we can restrict Joe Bloggs to only fill up vehicle ABC, MNO, and XYZ. This way, we can restrict which vehicles certain Joe can fill/drive.

A feature which is made use of and helps in providing extensive reporting is the ability to allocate vehicles to ***"departments"*** as well as separate them into vehicle ***"types"***. This reporting is further enhanced by the ability, with the tick of a checkbox, to see the dollar value of the fuel that each vehicle has consumed.

These are just a few of the unmatched features which set GIR apart

SMART CONTROLS SUMMARY

GIR gives you granular control over who fuels what, when, and how much:

VOLUME QUOTAS PER VEHICLE

Set a maximum fuel allowance per transaction.

Example:

Vehicle ABC has a 100L tank → configure the terminal to block any dispense exceeding 100L for that vehicle.

REFUEL FREQUENCY LIMITS

Prevent premature refueling by setting time-based restrictions.

Example:

If Vehicle ABC typically consumes 100L per week, disable refueling for 6–7 days after a full dispense.

DRIVER-VEHICLE ASSIGNMENT

Restrict drivers to specific vehicles.

Example:

Assign Joe Bloggs to vehicles ABC, MNO, and XYZ only—preventing unauthorized use of other fleet assets.

DEPARTMENT & VEHICLE TYPE REPORTING

Organize vehicles by department (e.g., Maintenance, Logistics) and type (e.g., Excavator, Truck, Van).

***BONUS**: With one checkbox, view the dollar value of fuel consumed per vehicle—ideal for cost allocation and budgeting.*

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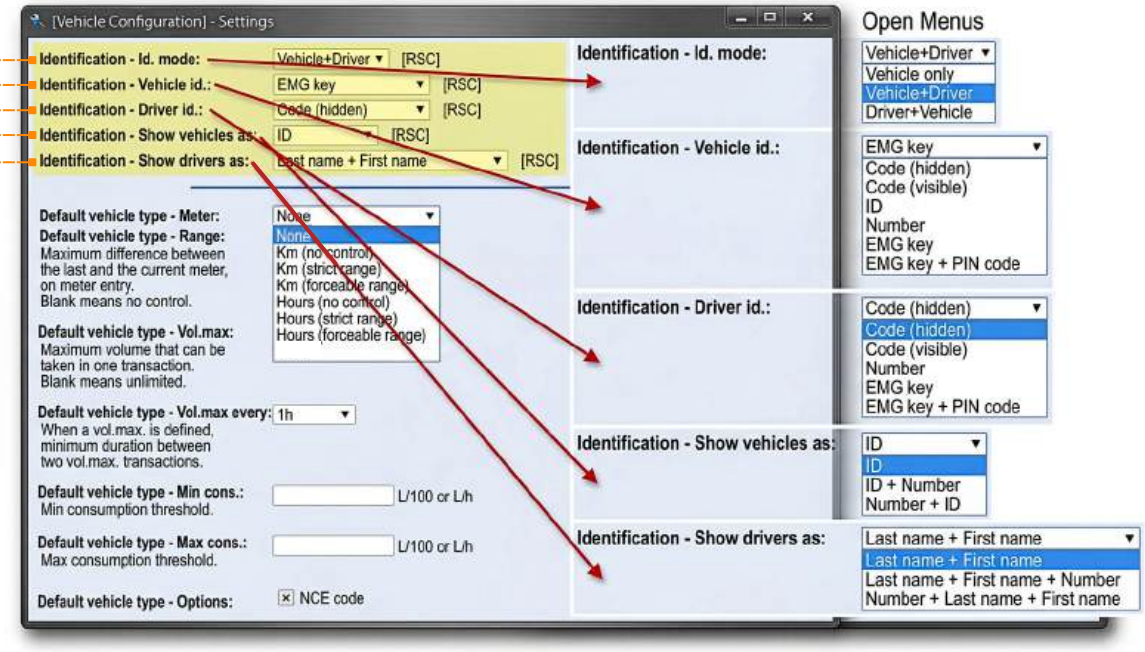
IDENTIFICATION SETTINGS: BACKEND CONFIGURATION

GIR's flexible identification engine lets you tailor the user experience to your operational needs. You can have the terminal request various information regarding the identification of drivers and vehicles.



01 Firstly, in the Identification Mode, we can have the system request "Vehicle Only", "Vehicle then Driver" or "Driver then Vehicle". The "Vehicle Only" mode is used for companies only interested in monitoring vehicles and don't care to record their drivers. The other two options, "Vehicle then Driver" or "Driver then Vehicle", are purely there to give you the choice of what order the request is made...so in the first case, Vehicle first, then driver.

02 Secondly, Identification of the Vehicle – This can be set so the system can accept RFID Tags (or as the system calls them, EMG keys) along with accepting these RFID tags we can have the system request a PIN number associated with the tag. The next option is a code (which can show as stars on the screen, so a hidden code) or a code which is visible on the screen or an ID number or just a number.

03 Thirdly, Identification of the Drivers – This is the same as the vehicle's identification, so the system can accept RFID Tags (or as the system calls them, EMG keys) along with accepting these RFID tags we can have the system request a PIN number associated with the tag. The next option is a code (which can show as stars on the screen, so a hidden code) or a code which is visible on the screen or an ID number or just a number.

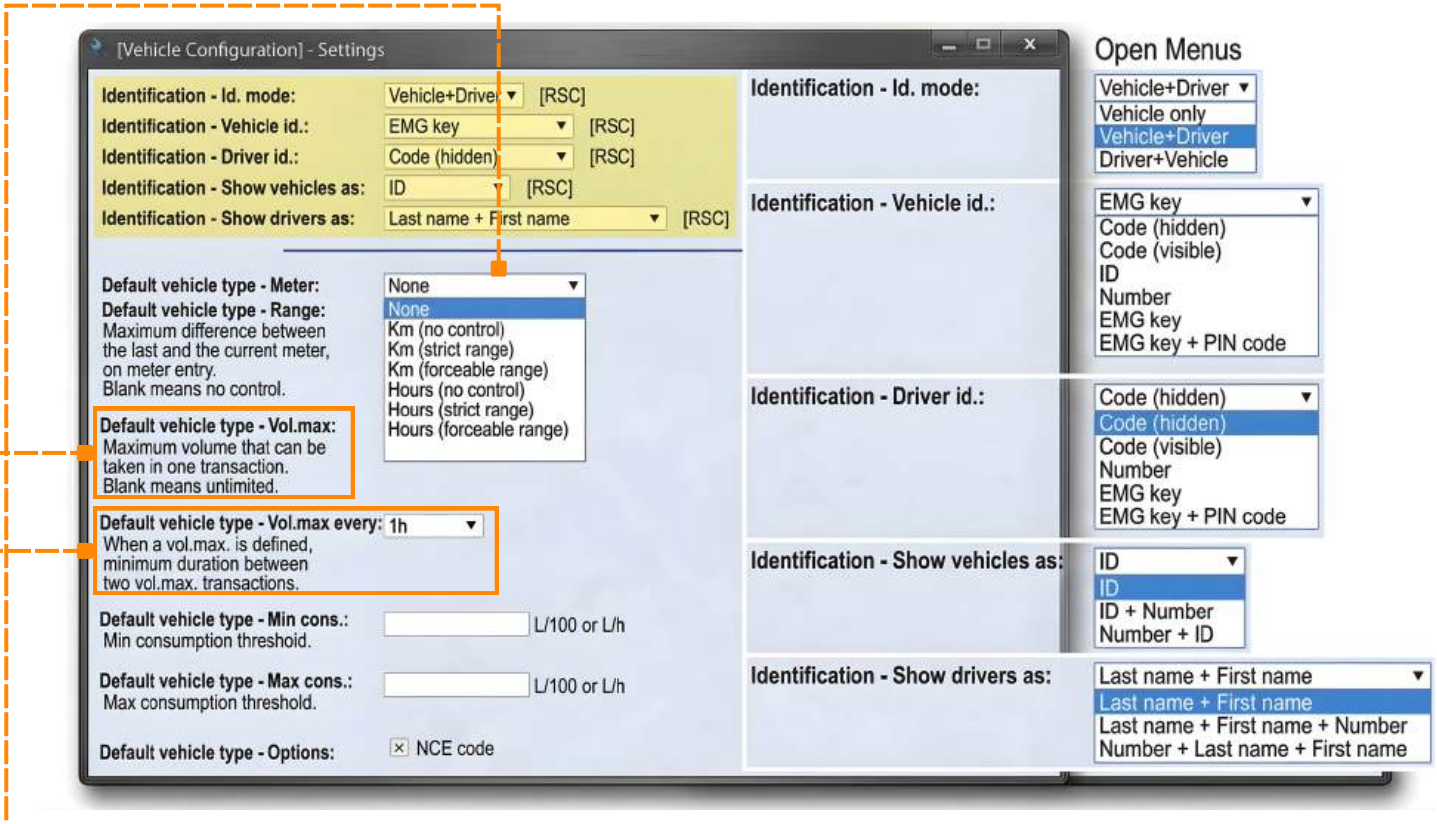
04 Fourthly, vehicle identification on the screen, in other words, what actually shows on the screen for that vehicle: ID, ID and number or number and ID. The ID is the registration number we have entered in the back-end and the number is a defined number we have allocated to the vehicle.

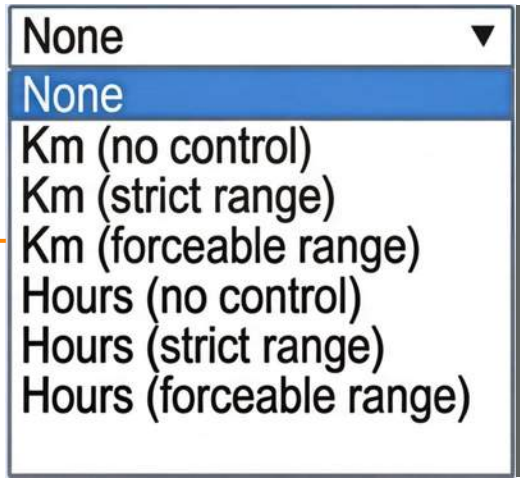
05 Fifthly, driver identification on the screen, in other words, what actually shows on the screen for that driver: ***Last name + first name or Last name + first name + number or number + Last name + first name.***

We then need to set up the vehicle types. This section defines what a terminal should do after a vehicle is identified. Two main aspects can be configured:

- **Optional entries**: before starting the delivery, the terminal prompts for additional entries that will be stored in the transaction (meter, NCE code).
- **Volume control**: the terminal limits the amount of fuel that a vehicle can take. These settings can also be defined in Vehicle Types.

When a vehicle with no specified type is identified, the settings from the global configuration are used. Otherwise, the settings from the vehicle type are used. This allows us to adapt the terminal behaviour to the identified vehicle. For instance, we may want to ask for a meter only for some vehicles.





None – means no meter km or hour meter will need to be entered.

Km (no control), ***Km (strict range)***, ***Km (forceable range)*** is when a meter entry is asked after the identification by km requested. There are three control modes to validate the integrity of the entered value:

- *No Control* – meaning the system will accept any value.
- *Strict range* – meaning that the value entered must be between the last known meter and the last known meter added to the defined range.

Example:

Last meter	Range	Allowed values
10000	2000	10000 to 12000

- *Forceable range* – meaning the same range control as previously mentioned, but when the same value is entered twice, the terminal allows bypassing the control. The meter will be marked as "Forced" in the transaction.

- **Default Vehicle Type volume max** – This defines the maximum volume that a vehicle can take in a single transaction.

- **Default vehicle type – "Vol.max every"** – This means when a "Vol.max" is defined, it defines how often a vehicle can take it. So, "Unlimited" means a vehicle can repeat filling transactions indefinitely.
Or 1 hour to 24 hours means a vehicle can take at most "Vol.max" during the specified time period.
So as an example let's assume that our "Vol.max" is set to 100 Litre and "Vol.max every" to 1 hour – So a vehicle that takes 100 litres at 8:00am must wait until 9:00am before being allowed to retake fuel. Now say that same vehicle takes 60 litres of fuel at 8:00am then comes back for fuel at 8:15am, it can take at the most 40 litres. Its credit will go back to 60 litres at 9:00am, then to 100 litres at 9:15am, that is, if no transactions occurred in the meantime.

The system allows for an added prompt. This is a non-checked entry prompt, meaning a prompt that has no wrong or right answer or method of restriction if incorrect. This is called a NCE code or ***non-checked entry***. It has automated backup features which include data backups as well as automated exports in CSV and other formats.

While we have touched on some of the primary settings for functionality, there are many, many more features that can be managed by enabling or disabling. Some of these features include the fact that you can key into the system the cost of fuel with each delivery you get. This way, the system always keeps a weighted average cost of fuel in the tank and allocates it at this price into each vehicle.

GIR TECHNICAL REVIEW SYSTEM SUMMARY

1. SYSTEM OVERVIEW

- Modular industrial fuel management architecture
- Designed for private fleet and depot fuel infrastructure
- Multi-site shared database capability
- REST API enabled (W150 & W250)
- Scalable hardware and supervision platform

2. HARDWARE ARCHITECTURE & SCALABILITY

- Supports up to 16 pumps per terminal
- Unlimited terminals per database
- Slave terminal capability on same site
- DIN rail mounted control modules
- Remote-mounted LED display and keypad options
- Flush-mount or enclosure installation flexibility
- Designed for expansion without terminal replacement

Modules with Din Rail for upgrade and expansion.

3. SUPERVISION & RECONCILIATION INTELLIGENCE

- Virtual tank level modelling (no ATG required)
- Mathematical stock calculation from transaction history
- Manual dip reconciliation capability
- Automated ATG comparison (with gauge module)
- Theoretical vs actual drift analysis
- Graphical variance reporting
- Email alert notifications for anomalies

Operations Console for remote mounting, if required.

4. USER IDENTIFICATION & ACCESS CONTROL

- PIN, RFID, HID and iButton identification
- Configurable identification workflows
- QWERTY keypad input for job/project/cost centre entry
- Transaction field customisation (standard in W150)
- Per-user permission hierarchy
- Time-of-day and volume restrictions
- Odometer and engine hour capture

5. SYSTEM CAPACITY

PARAMETER	SPECIFICATION	
	W150	W250
Maximum Pumps per Terminal	Up to 16	
Maximum Terminals per Database	Unlimited	
Users per Database	Up to 3000	Up to 10000
Vehicles per Database	Up to 3000	Up to 10000
Offline Transaction Memory	Approx. 2500 transactions	
Multi-Site Shared Database	Supported	

6. INTEGRATION & DATA EXPORT

- REST API available on W150 and W250
- JSON data export capability
- Fleet telematics integration
- ERP and accounting system compatibility
- BI reporting platform compatibility
- Centralised multi-site supervision

7. TYPICAL APPLICATIONS

- Civil contractor depots
- Transport and logistics facilities
- Mining service yards
- Government works depots
- Agricultural bulk fuel storage
- Fuel infrastructure integrators and tank builders