

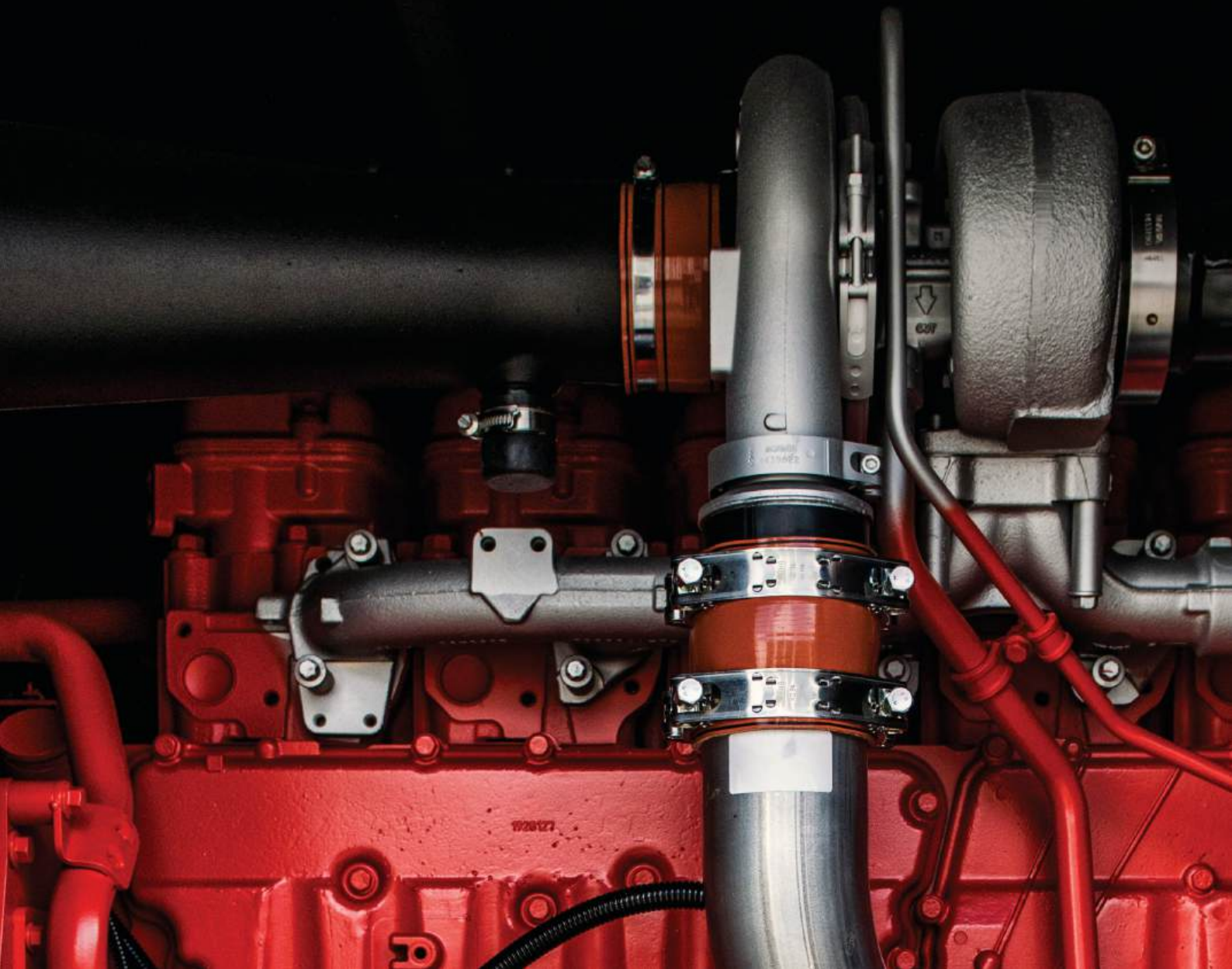


**Generate  
electricity  
using gas that is  
usually flared  
That's smart  
control**

**DualFuel Power  
Control Solutions**

[cogas.com.pl](http://cogas.com.pl)

Cogas specialises in creating electronic control and management solutions for use in the power generation industries and drive power markets.



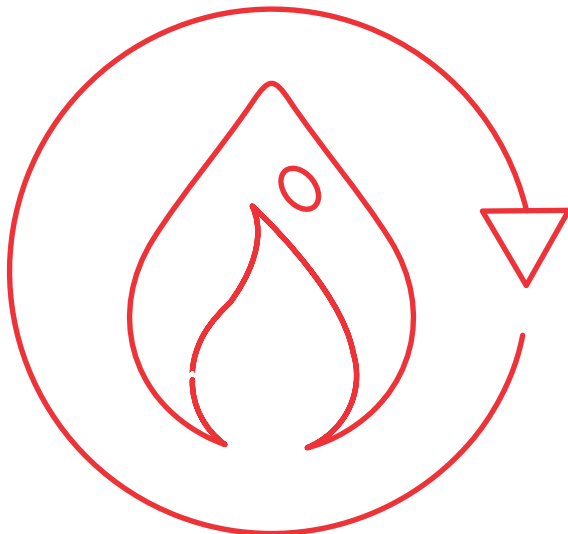
# Cogas Nevo Sky Diesel Solutions

Use Gas Instead of Diesel - Save Money and the Environment

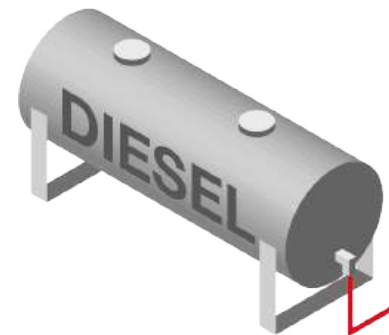
We have developed an easy to fit dualfuel management package which converts your diesel engine to run primarily on gas.

Cogas has solutions for both stationery and mobile engines, with significant savings to be made with either solution.

Cogas dualfuel system is ideally suited to generator packagers and original equipment manufacturers (OEMs) looking to deliver more economically beneficial power packages.



Gas tank



Diesel tank

# Cogas Nevo Sky Diesel Benefits

Save Money and the Environment

## Lower Fuel Costs

- > Up to 70% diesel consumption replaced by gas
- > Dramatically reduced operational costs
- > It enables the ongoing use of existing assets
- > Reduced maintenance costs – no ignition system
- > Seamless and automatic changeover to 100% diesel operation

## Simply Adaptive

- > Fully automatic compensation for changes in:
  - gas quality (typically Oil&Gas applications)
  - gas pressure
  - temperatures
- > **C**ogas Nevo Sky Diesel ensures best performance in every situation



A red line drawing of a fuel tank with a nozzle, positioned on the left side of the slide.

### Environmentally Friendly

- > Significant reduction in engine emissions:
  - $\text{NO}_x$ , PM
  - $\text{SO}_x$ ,  $\text{CO}_2$
- > With the use of a catalytic converter, can also reduce CO

### Fuel Flexibility

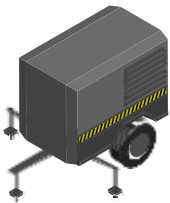
- > Extended run times without refueling
- > Smooth transition between diesel and dualfuel mode at any time
- > Dualfuel maintains the output of the diesel engine
- > Dualfuel maintains the transient performance of the diesel engine



# Solutions

Solutions for both stationery and mobile engines

## Small Single Speed Engines (up to 500 kW)

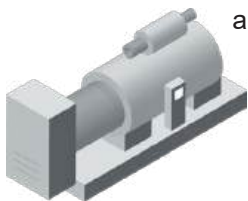


Cogas Nevo Sky Diesel packages are cost effective, compact solutions designed for single speed Cogas Nevo Sky Diesel applications at nominal output power of up to 500 kW. They are available in two variants:

dualfuel LITE 100 and dualfuel LITE 500, for engines up to 100 kW and up to 500 kW respectively. These solutions are perfect for the Rental market or any other Power Generation applications using any type of gas.

- > High or low pressure single point gas injection technology, gas injected before or after the turbocharger
- > Algorithm with automatic compensation for gas quality changes
- > Easy installation and commissioning
- > Harsh environmental design
- > IP-69 enclosure fits to any application

## Single Speed Engines



Cogas Nevo Sky Diesel package is a fully programmable solution designed for any single speed dualfuel application, with its features perfectly suitable for Oil & Gas, Mining and Rental applications.

- > Algorithm with automatic
- > Enable factory setting of dualfuel system
- > Simplified installation and commissioning
- > GPRS/GSM remote monitoring
- > IP-69 enclosure fits to any application
- > Optional high pressure single point gas injection before/after turbocharger

## Variable Speed Engines

Cogas Nevo Sky Diesel MOBILE package is a fully programmable solution designed for any mobile variable speed applications as Mine haul trucks, Frack trucks, Locomotives or Marine propulsion engines.

- > Fully configurable 3D maps
- > IP-69 Harsh environmental design allows full integration in applications with limited space
- > Remote monitoring
- > GPRS/GSM remote monitoring
- > GPS Location
- > Extensive history records
- > Optional high or low pressure single point gas injection technology; gas injected before or after the turbocharger

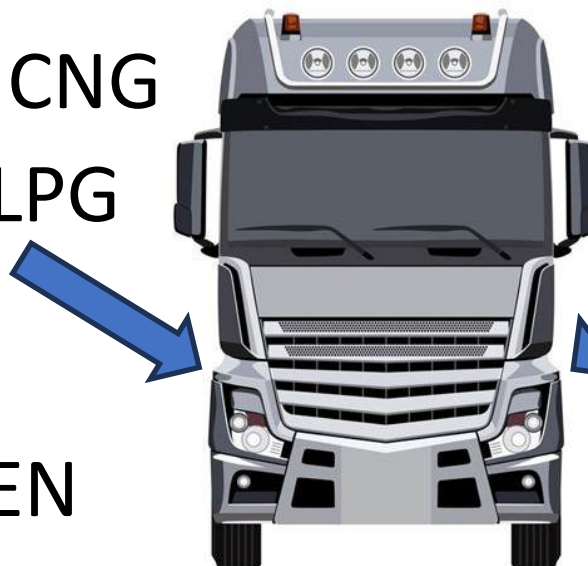
DME

CNG, bio CNG

LPG, bio LPG

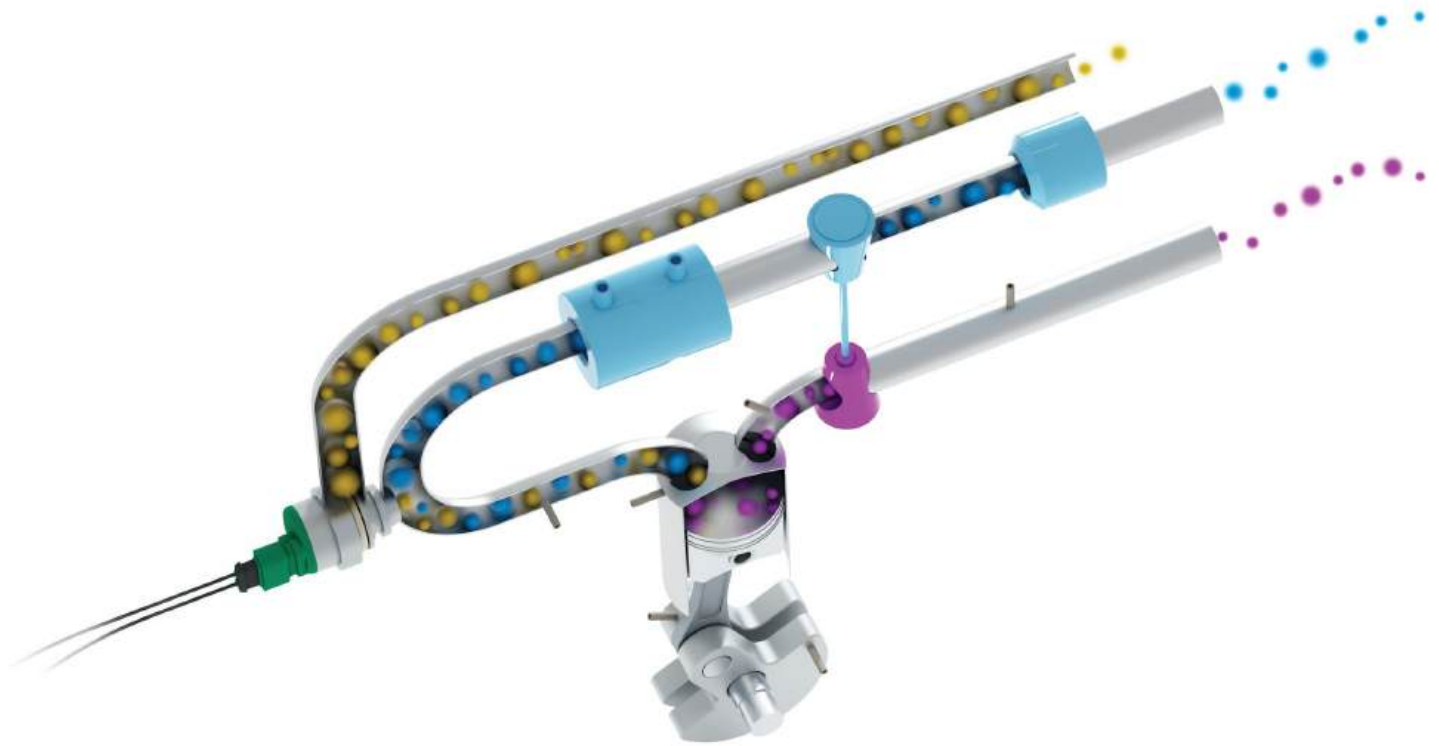
SYNGAS

HYDROGEN



Diesel,  
bioDiesel

# Cogas Nevo Sky Diesel high pressure single point injection system



Cogas new generation of dualfuel controllers we have developed technology capable of delivering gas into the engine via high pressure injectors.

Single point injectors are placed before/after the turbocharger enabling the Cogas Nevo Sky Diesel controller precise gas portion control with higher efficiency and increased safety. Simplified gas delivery into the engine air manifold offers ideal cost effective solution.

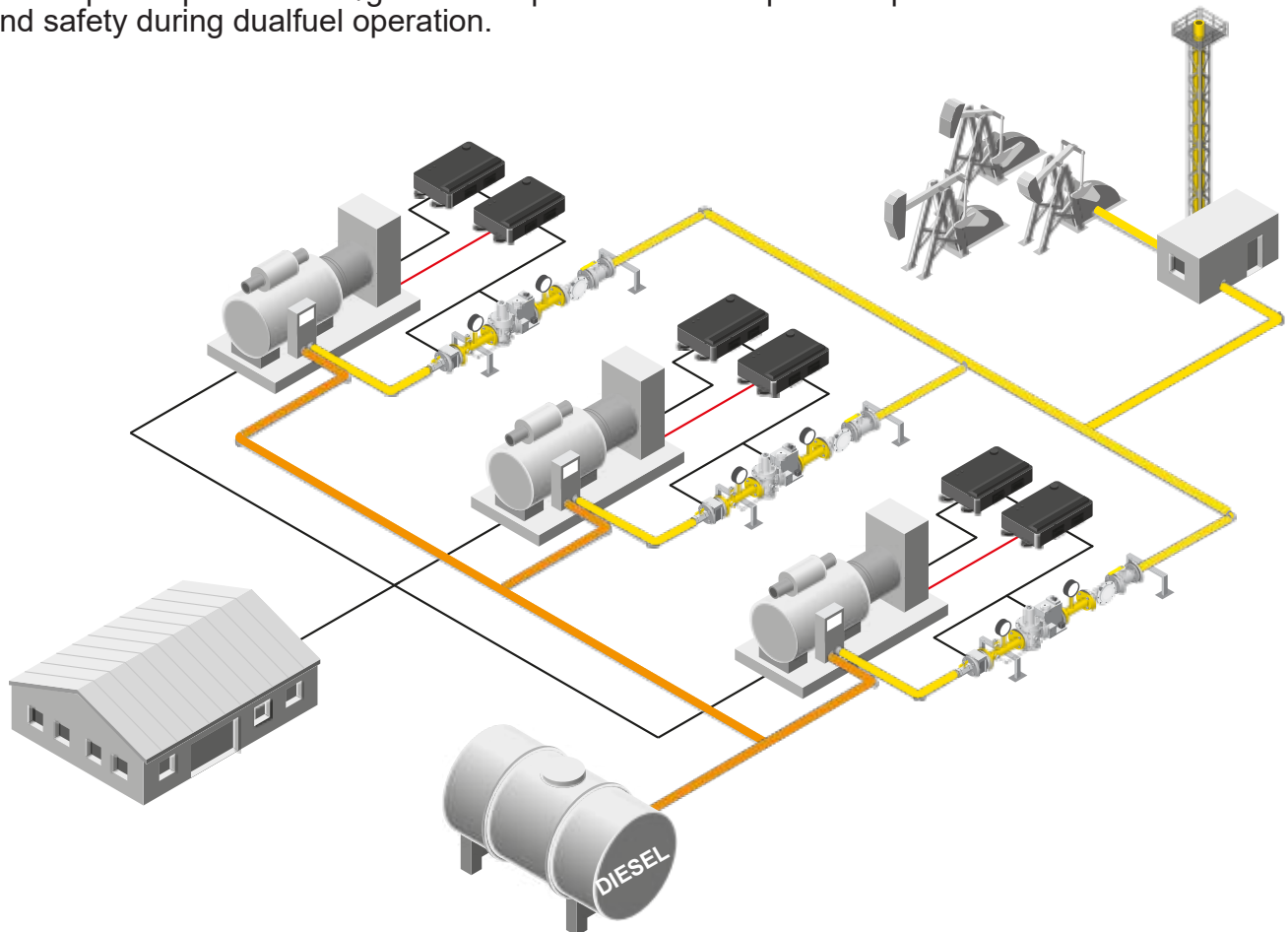
This technology is available to applications using new dualfuel products.



# Power generation using flare gas

In this application the dualfuel system uses flare-gas to substitute the diesel portion of the fuel. This application is particularly efficient as it uses gas that would normally be burned as a waste product during oil production.

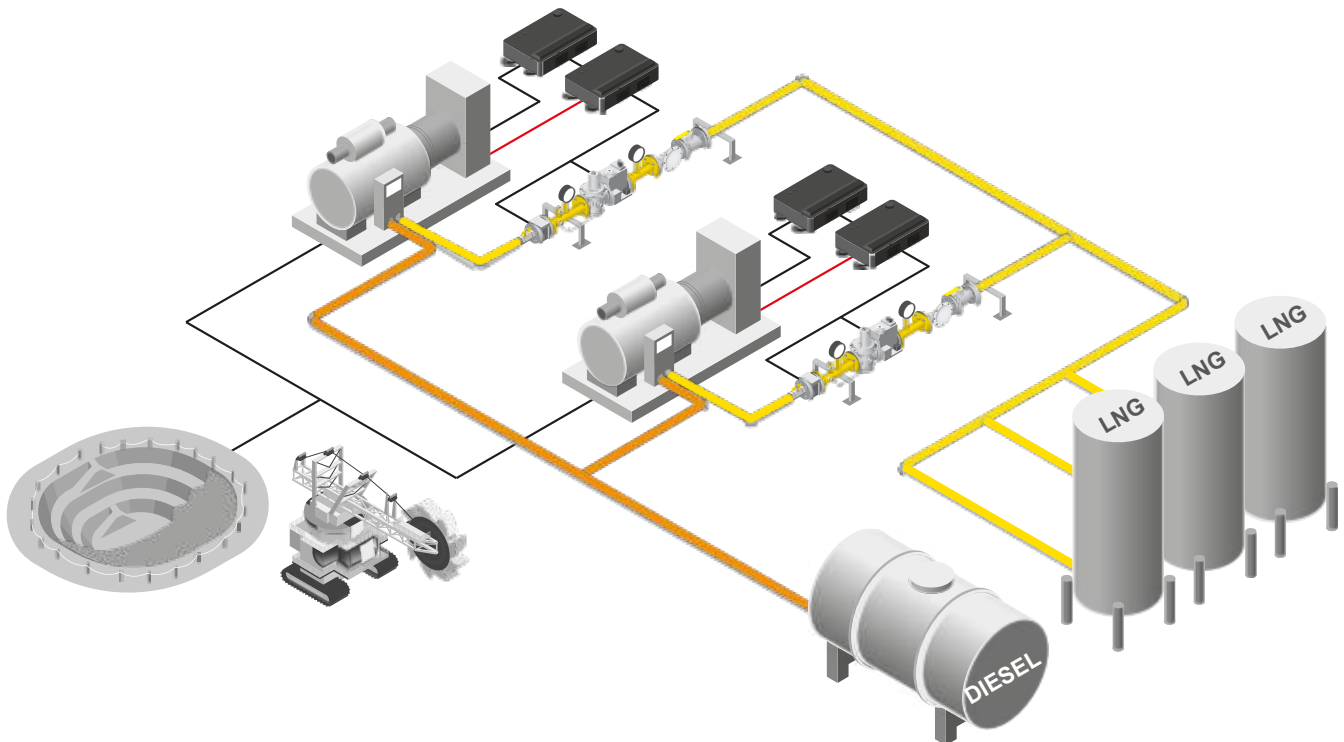
Cogas Nevo Sky Diesel solution with new algorithm is able to react on various gas quality to set up the optimal diesel/gas ratio to provide the best possible performance and safety during dualfuel operation.



# Remote mine power with stored gas

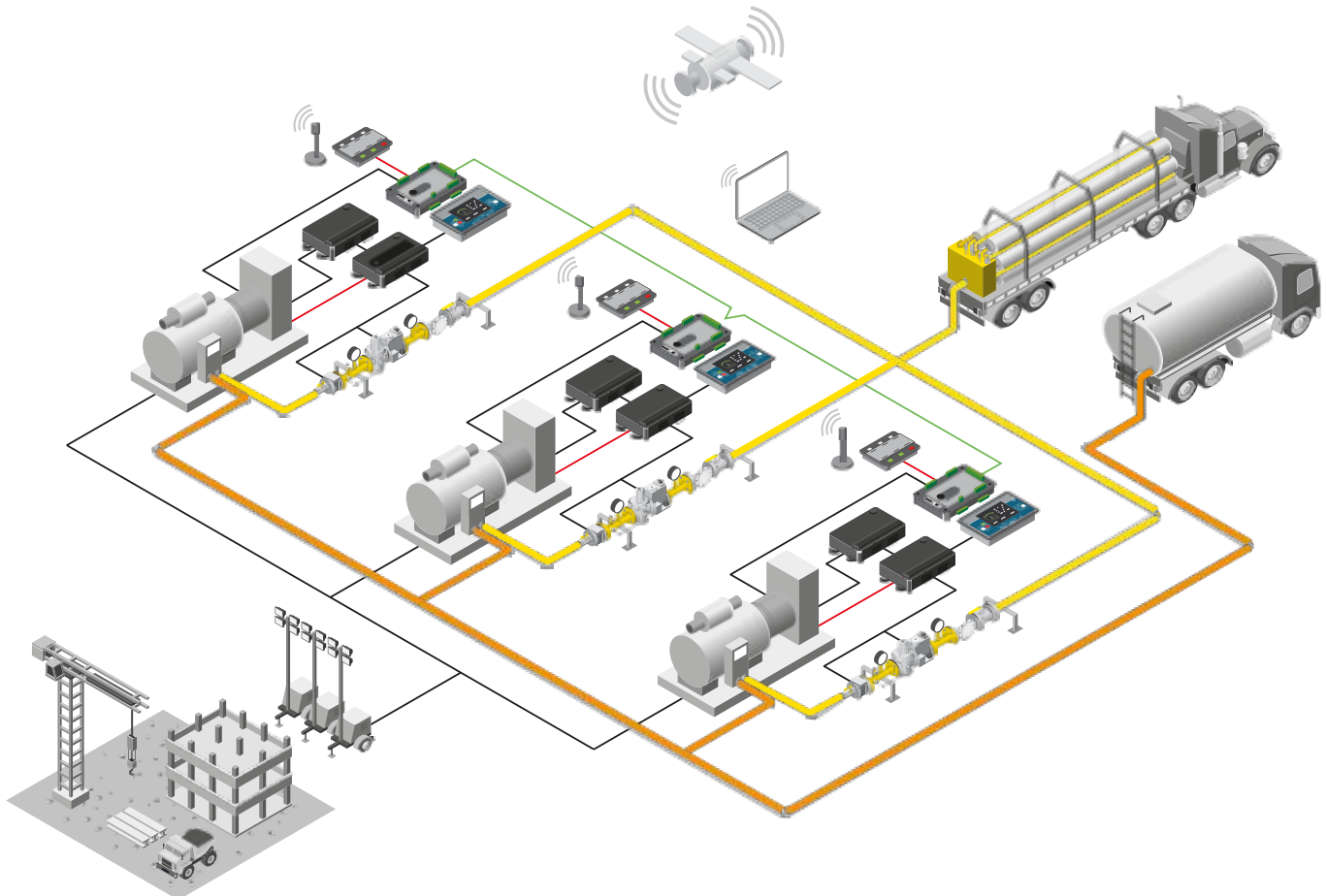
In this application natural gas is provided from on-site storage tanks, alongside the standard diesel tanks, which are refilled as normal. This is particularly useful for 'semi-permanent' or rental power generation applications such as mines, holiday resorts or long-term construction sites.

The Cogas dualfuel solution brings operational costs reduce as well as it is more environmentally friendly. Up to 70 % diesel fuel is replaced by LNG. There is significant reduce  $\text{NO}_x$ , PM,  $\text{SO}_x$  and  $\text{CO}_2$  emissions compare to 100% diesel operation.



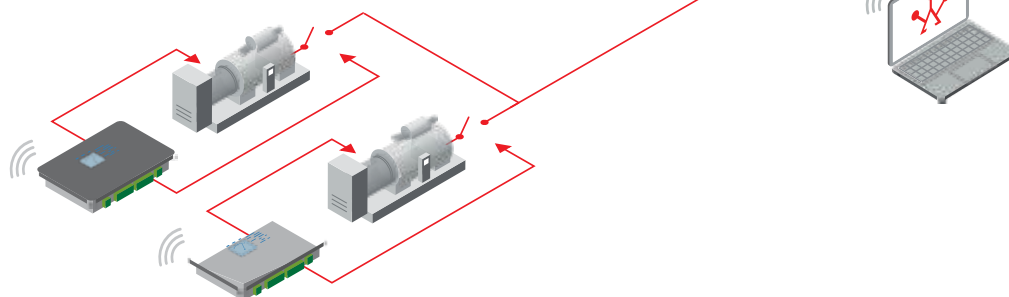
# Virtual pipeline gas distribution

In many places of the world gas infrastructure is not well established yet and gas distribution is available through CNG or LNG virtual pipeline by trucks. Cogas Nevo Sky Diesel is great option how to use gas from virtual pipelines and enable any diesel generator to run back on 100 % diesel.



# WebSupervisor

A Cloud-based application that enables remote monitoring, management and analyses of a gen-set fleet and 3<sup>rd</sup> party devices from anywhere.



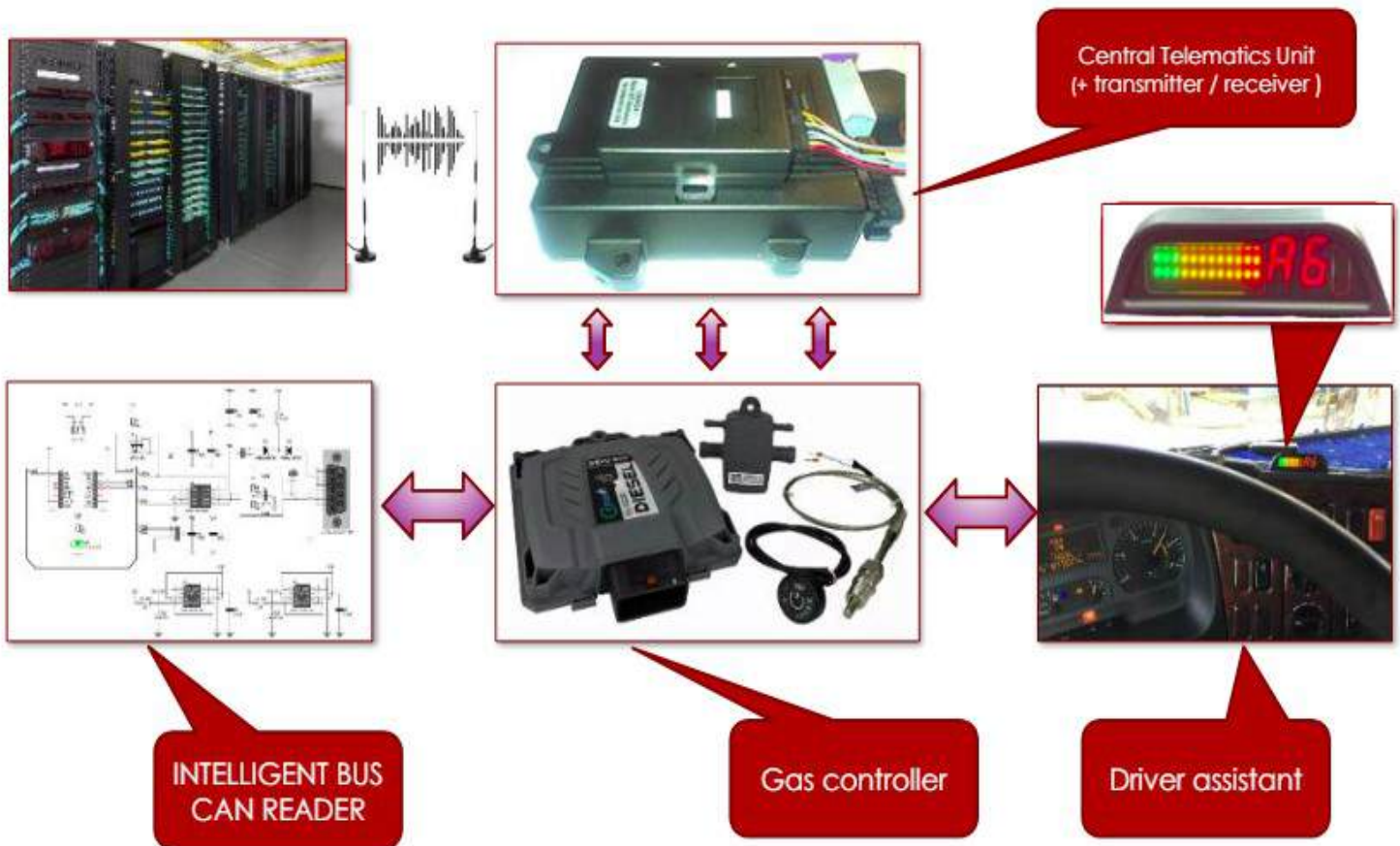
## Main Features

- > List and map views of devices and alerts on one screen
- > Device tracking and geofencing\*
- > Dashboard with fleet and group of devices statistics
- > Automatic reports for each device, or a group of devices, with customization options.
- > Alarm Analyser which can help reduce maintenance costs
- > Advanced trend representation (bar graphs, heat maps and more)
- > 3rd party device monitoring
- > API: able to download data and integrate in CRM, ERP, Power or other third part software
- > Screen Editor: modify the data that is displayed according to your needs
- > User activity logger: logs all user activity for a device or fleet
- > Download controller's history files (event-based history)
- > User management with several levels of permission

\*Tracking and geofencing requires purchasing an additional GPS card.



**The unique world solution - smart fuel installation installation can be remotely monitored and controlled via a specialized device equipped with a transmitter/receiver**









***Our distributors (world):***



