

Delivering the Business Case for Gas Vehicles

NGV Day June 2014

gasrec
FUTURE-PROOF FUELS





Supply Security



Trading



Distribution, Maintenance



Sales and driver training

- Collect and liquefy methane from landfill
- Developed plant design and operating know how
- Project development for UK sourced stranded gas supplied

- Purchase LNG from 3rd parties under term and spot agreements

- Own LNG road tanker fleet and distribute bio-LNG

- Develop refueling stations and sell bio-LNG and LNG as alternatives to diesel for use in HGVs
- Bespoke station design
- Bias to open access stations

An increasing number of fleets are operating, trialling, or thinking about trialling gas vehicles.

There is no doubt that gas vehicles of all models are fundamentally cheaper and cleaner to operate.

The correct tailoring of a trial to suit an operation prior to adoption will enable accurate forecasting of when savings will be delivered.

How trails are best conducted?

What factors that should be considered?

There is a need to pull together the experiences of operators, manufacturers and converters of diesel vehicles to gas, and gas suppliers.



No two fleets the same

- Currently there is a premium to either convert to dual fuel or buy OEM product. This cost will apply to the largest and smallest operators.
- Significant variability in conversion cost/technology/Rol
- Other factors should also be considered as indicated in the table.
- Trials should be based on the dynamics of the intended operation:
 - Single or double deck trailers?
 - Max out on volume or weight?
 - Route profile?
 - Flexibility key or focus on specific routes?
 - CNG or LNG
 - Ownership profile
 - Future use of infrastructure (gas tanks)
- Most importantly **How will the drivers respond?**

Conversion technology		Commodity market		Duty cycle	
Cost of vehicle conversion	▼	Cost difference between diesel and natural gas	▲	Annual mileage	▲
Engine efficiency loss	▼			Fuel economy	▼
Maintenance costs	▼			Time in gas mode	▲

- **Real-world-results**
 - Rol – from 1.7 – 3.8 years
 - Pence per mile savings (ppm) from negative 8ppm through to 18ppm

Incorrectly set-up gas conversion:

Units which max out on volume rather than weight may not require the same engine map as those which max out on weight.

Inappropriate vehicle comparisons:

Comparison of gas vehicle performance versus a notional budgeted diesel truck performance can give very distorted results, are back to back runs appropriate?

Inaccurate or poor gas refuelling experience:

Not all stations are manned, is this a requirement for your operation or can an effective training programme be put in place?

Unrepresentative duty cycle:

Trialled vehicle different type from fleet
Inaccurate or inconsistent information
Driver behaviour



Early driver engagement is essential to deliver against the business plan.

Will CNG or LNG be better suited to the fleet team?

Are drivers fully engaged in terms of their behaviour impacting performance or is the workforce transient?

End of shift reports and early identification of issues essential, a drop in performance will impact focus.

Driver training teams and employee groups can provide the support required day to day if properly involved in the process.



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