

Project Reference List

Gert-Jan Rap

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Owner

Gert-Jan Rap

Over 35 years experience in development, homologation, training and commercialisation of components and systems for gaseous fuel propulsion

- LPG Liquefied Petroleum Gas
- CNG Compressed Natural Gas
- LNG Liquefied Natural Gas
- Bio-Methane Upgraded Biogas
- H₂ Hydrogen

on :

- engines
- on-road vehicles Light Duty and Heavy Duty
- off-road vehicles & non-road applications
- vehicle repair workshops

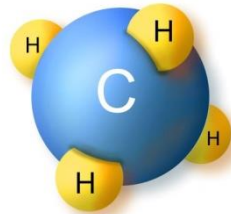
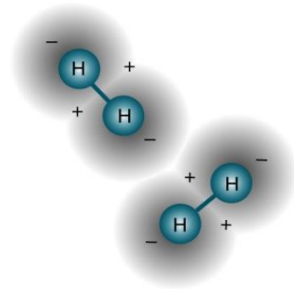


Activities

RAP Clean Vehicle Technology is active in the following fields

- Training
- Consultancy
- Supply of Infrastructure
- Supply of test equipment

All however specifically related to the gaseous fuels LPG, CNG, LNG, Biogas and Hydrogen.



Training

RAP Clean Vehicle Technology can organise the following training :

- Technical training / Safety training / Drivers training

Reference Projects :

- Mercedes-Benz Global Training (train-the-trainer CNG & LNG)
- MAN / Neoplan Traininginstitute, Germany (train-the-trainer CNG, LNG & H₂ for buses)
- Iveco BeNeLux / Iveco Schouten (technical dealer staff CNG & LNG for truck & bus)
- AFV (Volvo), Sweden (train-the-trainer CNG & Bio-Methane)
- Renault & Dacia, Germany (technical dealer staff LPG)
- AGCO Sisu Diesel / AGCO Valtra, Finland (technical CNG, Biogas, H₂)
- RDW-Dutch Road Authorities (technical / legislation CNG, LNG, H₂)
- Fire departments / Rescue Services (safety & calamity handling CNG, LNG, H₂)
- Almaty Electro Trans, Kazakhstan (technical training CNG buses Public Transport)
- College of New Technology – Almaty, Kazakhstan (via UNDP) (train-the-trainer CNG technology)
- Tata Engineering – UK (technical & safety training CNG technology)
- Scania Dealer & Scania Production (technical training CNG, LNG truck & bus, in coop. with Innovam)
- KIWA Training (CNG cylinder inspection / Hydrogen vehicle technology)
- CNHi / Iveco Germany, Netherlands and EMEA (CNG & LNG technical / commercial / safety training)
- Connexion and Arriva (H₂ for public transport, system technology, safety, maintenance workshop)
- UTAC – UK (H₂ component- & system technology as well staff qualification)
- Several OEM's, engineering and service companies (Hydrogen vehicles – Basic & Technology)
- European OEM of agricultural machinery (Qualification acc.to FBHM-099 on CNG and H₂ & High Voltage)
- Several OEM's and component manufacturers (Qualification acc. FBHM-099, level 2E & 3E CNG and H₂)



Consultancy

RAP Clean Vehicle Technology can consult for following:

- Engine & Vehicle development
- Vehicle homologation
- Production and Service workshop

Reference Projects :

- RAVO (development mono-fuel CNG street sweeper)
- TÜV / MAN Neoplan (homologation Hydrogen city bus)
- AGCO Valtra / Sisu GenPowexFinland (development Dual-Fuel CNG agricultural tractor & generator set)
- AGCO Sisu GenPowex Finland (development Dual-Fuel Biogas generator set)
- Lantmännen / Transport Styrelsen (Swedish national approval Valtra CNG tractor)
- AFV (Volvo) Sweden (Component selection Bi-fuel vehicles)
- Several cases ; support on accident investigation CNG, LNG, H₂ vehicles
- Gasföreningen Sweden (set up certification system CNG)
- Vehicle Repair Workshop CNG, LNG & H₂ (audit and advice)
- ROM – advice on CNG systems for Public Buses – Almaty Kazakhstan
- KIWA automotive / EBRD – Pre-Delivery-Inspection CNG buses for Almaty and Kyzylorda, Kazakhstan
- OEM; vehicle manufacturer – Approval of 250 bar CNG system for the UK
- OEM; off-road machinery manufacturer – component & system selection for CNG off-road equipment
- LNG tank manufacturer – Market study & Training
- OEM; advice on system design, component choice and regulation on Hydrogen FC off-road equipment
- OEM; advice on regulations for hydrogen ICE vehicles on- and off-highway



Infrastructure

RAP Clean Vehicle Technology can supply or advise on infrastructure :

- Refuelling CNG, LNG, Bio-methane and Hydrogen
- Transport CNG, LNG, Bio-methane and Hydrogen
- Customized test equipment

Reference Projects :

- Consultancy concerning virtual pipeline CNG, LNG, Hydrogen
- Consultancy concerning MRU (Mobile Refuelling Unit) CNG, Hydrogen
- Building demonstration CNG vehicle for training Fire Departments
- Test equipment for engines on oil platforms
- ROM Israel – advice on CNG refuelling station & bus service workshop Almaty-Kazakhstan
- Israel - advice on CNG refuelling station for bus refuelling
- Consultancy on Hydrogen infrastructure concerning compressed Hydrogen, cryogenic Hydrogen, LOHC's Metal Hydrides and Methanol
- Sales consultancy on CNG and Hydrogen storage- and transport modules for truck, bus, train and maritime applications, as well mobile refueling equipment

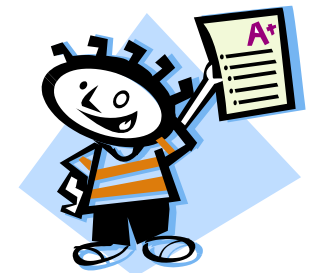


Other projects

RAP Clean Vehicle Technology can support in any other program related to gaseous vehicle fuels

Reference Projects :

- Feasibility Study Sweden (Dual-Fuel CNG & Biogas for Off-Road equipment)
in cooperation with Biogas Syd, E.ON gas Sverige, Lantmännen, SGC a.o.
- Market study CNG in Latin America
- Set up state accepted training / diploma “CNG-Technicus”
in cooperation with innovam, IBKI, RAI, Bovag a.o.
- Safety on vehicle workshops for Hydrogen vehicles, Norway
- CNG workshop, Turkey (in cooperation with ENGVA)
- Participation Borgeby Fältdagar, Sweden (Biogas tractor)
- Support RDW (Dutch Road Authorities) to set up CNG certification system
- Clean City program Almaty-Kazakhstan, 200 CNG buses for public transport
- Feasibility Study biogas agricultural tractor production in Achterhoek – NL
in cooperation with Pasmaan, WUR and ACT
- Accident investigation on LPG, CNG, LNG and H₂ vehicles (several)
- Investigate regulatory work for use of LPG on weed-killer machines (NL)
- Investigate regulatory work for use of CNG on industrial cleaning equipment (EU)
- Comparison for OEM on hydrogen storage systems including LOHC's, cGH₂ and LH₂, Methanol





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