

## Clean Fuels Services International

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Natural Gas Vehicles Consulting  
Emerging Technologies Development Consulting

### Customised CNG training courses

In response to requests from clients, Clean Fuels Services International (CFS) has prepared a comprehensive range of training modules which cover CNG technical, safety, standards, CNG refuelling station and fleet conversion project management and financial evaluation of CNG projects.

Customise your training course by selecting from the CNG training modules developed by CFS.

**Module 1:** CNG industry overview

**Module 2:** Properties (including safety and health issues) of natural gas and CNG

**Module 3:** Overview of CNG vehicle safety

**Module 4:** Standards and regulations

**Module 5:** Regulatory framework

**Module 6:** CNG refuelling stations

**Module 7:** Economics of vehicles and refuelling stations

**Module 8:** Refuelling station risk assessment

**Module 9:** How to start a successful CNG program

**Module 10:** Refuelling station installation practice

**Module 11:** Refuelling station safety practice

**Module 12:** Refuelling operation and maintenance (O&M)

**Module 13:** Learning from refuelling station safety incidents (selected from world database over the last 25 years)

**Module 14:** Vehicle installation and conversion

**Module 15:** CNG cylinder safety

**Module 16:** Vehicle safety practice

**Module 17:** Engine technologies

**Module 18:** Periodic inspection of vehicles

**Module 19:** Design and safety of vehicle workshops and garages

**Module 20:** Safety measures – CNG vehicles and refuelling stations

**Module 21:** CNG mother daughter system operational safety.

**Module 22:** Financial analysis – CNG refuelling station and fleet conversion projects

**Module 23:** Government financial support policy

**Module 24:** Managing a refuelling station construction project

**Module 25:** Learning from vehicle, cylinder and vehicle workshop safety incidents (selected from world database over the last 25 years).

**Module 26:** CNG emergency response.

**Module 27:** CNG vehicle fire protection design, operation and maintenance.

**Module 28:** CNG exhaust emissions and environmental benefits.

Intending trainees or their employers/ sponsors may select modules from the list above to suit their training needs.

The training sessions are interactive. Depending on the module, the trainees may be required to perform one or all of the following: internet searches, financial analysis spreadsheets, answering questions based on the lecture material, and numerical exercises under the trainer's supervision.

The length of each module including trainees' exercises and assignments may take between two and five days.

### **About the presenter - Dr Hien Ly**

Dr Hien Ly is a Sydney, Australia-based CNG expert with more than 30 years of CNG project and technical R&D experience in New Zealand and Australia. He has authored numerous reports and papers on CNG, and consulted large Australian CNG vehicle fleets on safety and management issues.

He has consulted in Australia and internationally on CNG projects including training courses, feasibility studies, government support policy, vehicle and refuelling station supply tender specification and evaluation, standards and regulations, research reports, safety training, safety incident investigations, and safety audits of facilities, and operational procedures.

He has presented papers at several national and international NGV conferences, as well as holding CNG training workshops in Australia and other countries.

Dr Ly has investigated a number of safety incidents in Australia, and is an avid observer of incidents in several countries for many years. He has access to CNG safety incident databases in several major countries.

Dr Ly has worked on all CNG-related standards in New Zealand and Australia since 1980, and served in ISO CNG standard working groups since 1989, as a consultant to the International Association for Natural Gas Vehicles (IANGV).

Dr Ly is at present chairman of Standards Australia's committee AG 009 (CNG refuelling stations), and a member of Standards Australia's committees for gas cylinders, gas fuelled vehicles and gas quality

### **Who will Benefit from Attending?**

- Existing and intending CNG vehicle fleet owners and operators

- CNG refuelling station designers and operators
- CNG equipment/system distributors and service providers
- CNG vehicle conversion and service workshops
- CNG vehicle and refuelling station approval agencies
- CNG vehicle inspectors and CNG cylinder inspectors
- Natural gas and power utilities
- Pressure equipment and workplace safety regulatory authorities
- National standards committees responsible for CNG standards
- Road transport authorities
- Civil defence and emergency services, the police and fire departments
- Risk assessors and auditors
- Technical colleges with CNG training courses
- Safety researchers
- Incident investigators