

Information Packet on Training Courses

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Background

Until today there has been no existing European centre of excellence for focused training in the combined areas of natural gas, hydrogen fuels, new technologies, markets and politics. ENGVA has responded to this vacuum with the European Gaseous Fuels Training Institute. Convinced that the strategy to reach European 2020 transport targets must include a strong informational and training component, ENGVA hosts in-house training for groups of individuals at its offices in Hoofddorp, The Netherlands, just outside of Amsterdam Schiphol Airport. We also offer on-site training specialised to the needs of different companies, government decision makers and others.

Target Audience

The Institute has been established for the following groups of people:

- Newcomers to natural gas vehicles (NGVs) & hydrogen vehicles (H₂Vs)
- Political decision makers
 - Municipal policy & administration staff
 - Fleet decision makers and managers
- Fleet owners and operators (public & private sector)
- Train the trainers (suited to developing markets)

Scope

The information provided during our training workshops cover the following areas:

- Alternative fuels
- Vehicle related
- Fuelling systems
- Policy making
- Marketing & commercialisation strategies

Workshops

We offer several different kinds and levels of training workshops and also tailor our training sessions to your needs and come to you on-location with teams of highly professional training staff:

- Generic training
- In-depth training
- Private trainings

The Trainers

Trainers present during the workshops include:

- ENGVA staff: knowledge & management
- ENGVA members with specialised expertise, including suppliers of:
 - Vehicle & equipment
 - Fuelling equipment & systems
- Specialised expertise, as may be required





Generic NGV Training Seminar – 11 October 2005

The European Gaseous Fuel Training Institute will hold its next Generic NGV Training Seminar on **11 October 2005** at the ENGVA offices in Hoofddorp, Netherlands (just outside of Schiphol Airport). The Generic Training is suitable for people with a wide variety of technical and non-technical backgrounds. It is designed to simplify complex concepts so attendees can leave with a strong and focused understanding of NGV & alternative fuel markets, policies and technologies. The one-day seminar covers the following topics:

Morning Sessions

Overview of worldwide and European NGV market development

Focus on different country approaches and models

Options and approaches to alternative fuel policy making

Natural Gas Vehicle Technologies: principles and applications for light- and heavy-duty vehicles

Internal combustion, spark ignited engines (petrol) and compression ignition (diesel) engines

Afternoon Sessions

Principles of Natural Gas Compressor Stations: Fuelling options & models for compressed & liquefied natural gas stations

Basic strategies for construction & specification of CNG stations to meet needs of specific fleet and commuter market

Natural gas in the context of other traditional and alternative fuels

Standards overview

Focus on Europe while considering the worldwide context

For more details please contact ENGVA at info@engva.nl or visit the ENGVA website www.engva.org and go to the Gaseous Fuels Training Institute section (<http://www.engva.org/view.phtml?page=EGFTI.phtml>). ENGVA also provides detailed, form-fitted training courses for companies, government decision makers and others involved in gaseous fuel programme development. Sessions can be designed specifically for clients' requirements upon request and may include topics such as:

Employee awareness for companies in the gaseous fuels business

- To help staff in understanding their role in the alternative fuels activities in Europe and worldwide

Gaseous fuels programme development

- Aimed at various stakeholders, including governments, looking to make their policies favourable to alternative fuels.
- Sessions can be provided directly to governments or through other stakeholders (i.e. gas industry) looking to conduct seminars to increase government knowledge about policies & practices favouring the use of alternative & gaseous fuels

The one-day overview course includes lunch and a *complete and extensive* package of the PowerPoint presentations given during the training as well as detailed materials to support each training component. The course is offered at €325 (excl. VAT) for ENGVA members and at €395(excl. VAT) for non-members.





Overview In-Depth Training Vehicle Technology – 12 October 2005

General

Vehicle specifications & physical properties of compressed natural gas (CNG) & liquefied natural gas (LNG)

Safety

Vehicle Economics

Regulations & standards

Vehicle type approval

Retrofit

OEM

Workshop and maintenance

Requirements for retrofit workshop

Requirements for workshop building

Requirements for workshop tools

Light Duty

CNG system overview

Engine technology

- Emission optimisation
- Ignition optimisation

Components

Different types of components

- Fillers
- Piping and fittings
- CNG tanks
- Pressure regulation and mixture building

Mounting components into the vehicle

Heavy Duty

Dual Fuel

Mono-Fuel

Engine technology

- Changes to basic engine
- Changes to coolant system
- Changes to exhaust and engine compartment
- Emission optimisation

Components

Different types of components

- Fillers
- Piping and fittings
- CNG tanks
- Pressure regulation and mixture building

Mounting components onto the vehicle

- General requirements

Tank-mounting



Safety Training CNG and Hydrogen Vehicles
30 November 2005 (tentatively planned)

General

Introduction NGV's and H₂V
Why care about safety?
Pressure and cryogenics

Light- and Heavy Duty NGVs

CNG system overview
Risk areas
Mechanical construction of CNG system in vehicles
Vehicle related

- Modification to the vehicle
- Mounting of components to the vehicle
- Crashzone, etc.

Component and system related

- Fillers
- Piping and fittings
- Lock off valves
- HPRs
- PRDs
- CNG tanks
- Electronic safety devices of CNG system

Regulations and Standards

Safety-related regulations & standards

- Retrofit
- OEM

Workshop and maintenance

Safety-related requirements for retrofit workshop
Requirements for workshop tools & leakage testing
Underground parking

Accident handling

Safety requirements during and after accidents (fire, collision, etc.)
Towing and lifting NGVs
Repairs on NGVs

Hydrogen Component of Gaseous Fuels Safety Workshop - Karen Hall

Hydrogen Vehicles

- Brief description of applications for hydrogen: past, present and future
- Hydrogen Vehicles – ICEs and Fuel Cells – trends and timelines
- Progress and Challenges
- Vehicle Safety Issues: Discussion of national and international hydrogen vehicle safety activities, including SAE recommended practices, the California Fuel Cell Partnership guidelines and emergency responders manual and ISO activities

Infrastructure and Refueling

- Hydrogen production, storage, and delivery overview
- Refueling station requirements: NFPA, ICC, validation activities
- Guidance documents (Guideline for code officials, specification for hydrogen fuel quality, implications for station operators)
- Hydrogen Fuel Safety Video Presentation (produced by hydrogen 2000)

Other Useful Information

VAT

Taxable supply of services

From a VAT point of view ENGVA renders services for a consideration. Hence these services are subject to VAT.

Taxable in the Netherlands

The general rule is that services are deemed to be supplied (and taxable) at the place where the supplier (ENGVA) resides (*article, 1 Sixth Directive / Article 6,1 Dutch VAT act*). Although this rule may vary for a number of services, we feel that for membership fees the general rule applies. Hence ENGVA charges 19% Dutch VAT to all its members, regardless the place of residence of the member.

Member may recover VAT

Foreign companies may recover this input VAT, by submitting an Eight (for EU Companies) or Thirteenth (for non-EU Companies) Directive VAT reclaim at the tax Office for Foreign Entrepreneurs at Heerlen.

ACCOMODATION

ENGVA recommends the below-mentioned hotel as an option of where to stay during your training course, should you wish to spend the night in the Hoofddorp/Schiphol area. ENGVA has made **no** block reservations at these hotels. The following hotels can be booked through the email addresses mentioned. Please make sure that you mention **ENGVA** upon your reservation in order to guarantee the best available price.

Crowne Plaza

Planeetbaan 2
NL-2132 HZ Hoofddorp

Netherlands

Reservations Desk

Ms. Saskia Dijkstra

Ms. Stefanie Piet

Ms. Veronique Vriend

Tel: +31 (0)23 566 96 96

Fax: +31 (0)23 565 05 21

Email: reserv.amsap@ichotelsgroup.com

www.crowneplaza.com/ams.schiphol

Price Single room: € 245

(Incl. Breakfast / Excl. City Tax)

Note: Cheaper rates are offered for booking via the Internet, with credit card payment as the only payment method.