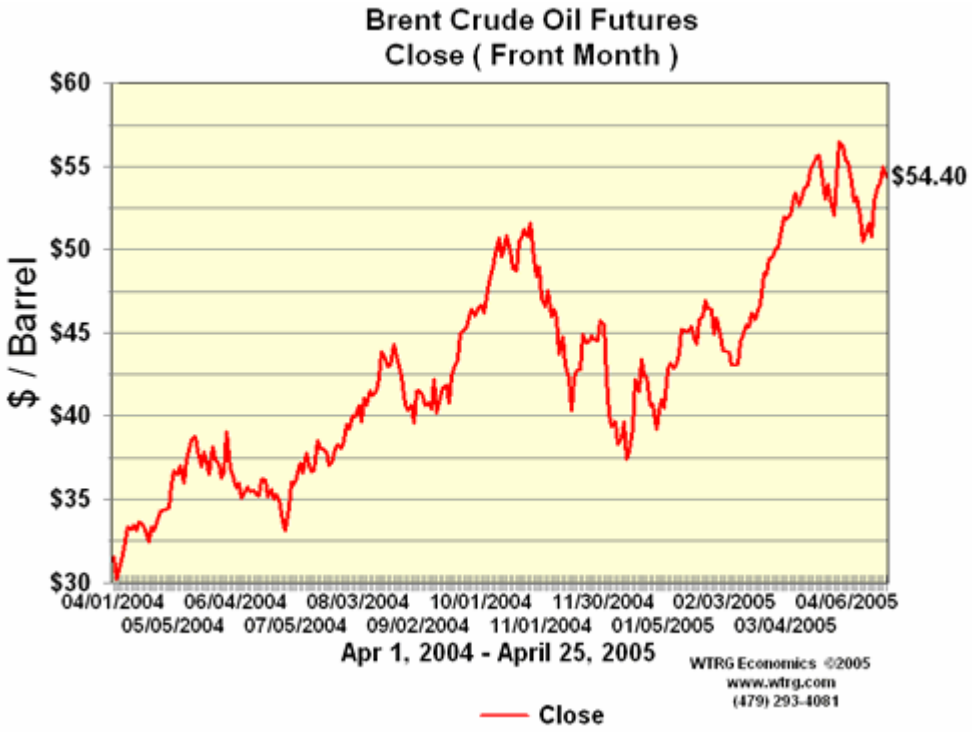
April 2005, issue no. 2/2005

AMFI Newsletter

Advanced Motor Fuels Information



Markets are nervous…"Those who believed Opec all these years are eating their hats now. Fifty dollars a barrel is a fond memory now, and $60 is just a matter of time." *www.euobserver.com*

AMFI Newsletter is prepared for the members of the Implementing Agreement on Advanced Motor Fuels of the International Energy Agency (IEA/AMF).

AMFI provides four yearly electronic Newsletters describing recent news on advanced motor fuels, vehicles, energy and environmental issues in general. AMFI Newsletter is available on the AMF website:

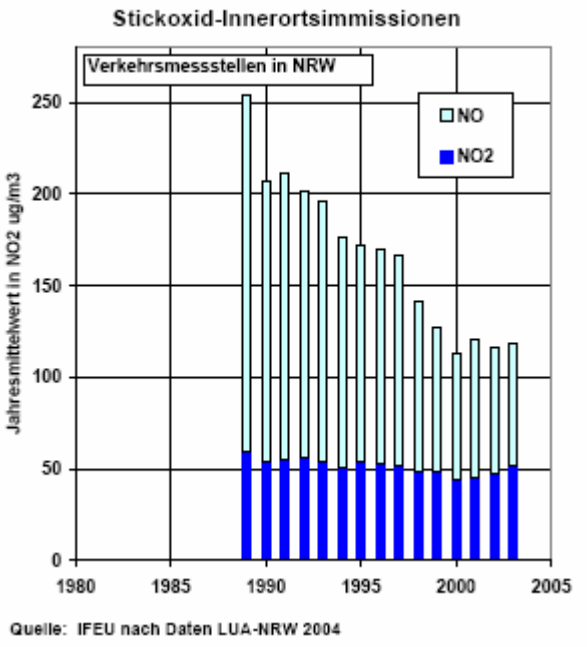
www.iea-amf.vtt.fi

CONTENT

Nitrogen dioxide dilemma

Nitrogen oxide (NO_x) emissions from vehicles comprise mainly nitrogen monoxide (NO), and to lesser extent nitrogen dioxide (NO_2). NO oxidizes to NO_2 in the atmosphere, and thus NO_x is calculated and shown as NO_2. NO is rather harmless to human health, whereas NO_2 causes health risks at certain concentrations. In addition, there are other harmful effects of nitrogen oxides, e.g. NO_2 plays an important role in ozone formation via complex reactions with VOCs. Typically, NO_2 concentration levels in the urban air are not high enough to cause health effects, but local problems may occur, e.g. aside heavily-loaded roads.

Generally, NO_x concentrations in many urban areas have decreased remarkably over past ten years as a result of replacing old high-emitting diesel technologies with new ones. Surprisingly, NO_2 levels have not necessarily acted in the same way. For instance, Höpfner et al. reported that in Germany NO_2 concentrations are at the same level as in 1987, whereas NO_x concentrations have decreased by 50% at the same time period (see Figure). Possible explanation to unexpectedly high NO_2 concentration is high NO_2/NO ratio from diesel vehicles equipped with oxidation catalyst or particulate filter. In Germany, current NO_2 concentrations exceed the air quality limit in many locations, and this limit will be even more stringent in future (2010: yearly average max. 40 µg/m³). *Source: Höpfner et al. Emissionen und Imissionen in Deutschland: Eine aktuelle Bestandsaufnahme. ADAC-Fachtagung, Berlin, 19 Nov 2004 (www.ifeu.de).*



The situation in US seems to be somewhat different than in Europe. US EPA reports that over the past 20 years, both NO_2 and NO_x concentrations across US have decreased. Decline in NO_2 is assumed to be due to low emissions of gasoline cars. However, also unchanged or increasing NO_2 concentrations have been observed in the Midwest and the North Central states. This increase coincides with increased NO_x emissions from transportation (both onroad and nonroad) and power plants. While NO_x emissions are declining overall, emissions from some sources such as nonroad engines have increased since 1983. In response, EPA has proposed regulations that will significantly control NO_x emissions from nonroad diesel engines. *US EPA: More Details on Nitrogen Dioxide - Based on Data Through 2002. (www.epa.gov)*

NO_2- Role of aftertreatment technologies

Engine-out NO_x portion contain typically some 5% of NO_2, but even higher than 20% of NO_2 may exist in raw exhaust at some running conditions. The engine-out NO_2/NO_x ratio depends on the engine design, calibration and the operating conditions. Diesel engines have higher NO_2/NO_x ratio than gasoline engines.

NO_2 emissions from stoichiometric catalyst-equipped gasoline cars or NGVs have been reported to be extremely low (CO seems to prevent oxidation of NO). *Source: Sjödin et al. Vägvärket 2004:135 (www.vv.se).* However, it is known that certain aftertreatment devices of vehicles, oxidation catalysts, and especially some particulate filter solutions, e.g. CRT type devices, may generate high NO_2/NO_x ratio. AECC report on NO_2 Emissions (*www.aecc.be*) summarizes this issue.

Nitrogen dioxide (NO_2): reddish-brown, reactive gas. Nitrogen oxides (NO_x), via reactions with VOCs, play significant role in the formation of ozone. NO_x emissions originate mainly from combustion processes (transportation and industry). Most of the NO_x, about 95%, is emitted as NO, which converts to NO_2 in the environment. Thus NO_x is calculated and shown as NO_2.
NO_2 healt risks: short term exposures (< 3 hours): may cause cough, increased changes in airway responsiveness and pulmonary function, increase in preexisting respiratory illnesses. Long-term exposures: increased susceptibility to respiratory infection and structural alterations in the lungs.

Many diesel vehicles today are equipped with oxidation catalysts. NO_2 is stable and oxidation of NO to NO_2 takes place in the atmosphere. This reaction occurs also over an oxidation catalyst, but at a faster rate. One option used in Diesel Particulate Filters (DPF) is to create NO_2 to enhance regeneration. A properly balanced system should not produce more NO_2 than needed. However, NO_2 production depends on many factors, i.a. engine-out NO_x and PM, operating conditions, catalyst age, formulation and size. Photochemical modelling by the California Air Resources Board shows that no near-source NO_2 exceedances would be expected with an NO_2 to NO_x ratio of up to 20%.

Actions on NO_2 emissions linked to aftertreatment devices

Due to the observations of increased NO_2/NO_x ratios from aftertreatment devices, the California ARB has proposed an amendment in the diesel emission control verification procedure. In 2007, emission control systems would not be allowed to increase NO_2 emissions by more than 20% above the engine baseline level (% of the total NO_x by mass). The original procedure defined an NO_2 emission limit as 20% of the total baseline NO_x emission, but this was too restrictive as it did not account for variability in engine-out NO_2. The current proposal sets a limit, defined as a maximum incremental increase of 20% by mass over the baseline NO_2 emission level. For instance, for an engine with a baseline NO_2 of 10%, this corresponds to total NO_2 emissions of 30% of the NO_x. The proposal also includes requirements to pre-condition devices before testing to remove any stored PM, which could react with NO_2 and lower its tailpipe levels.

Healt effects of tailpipe NO2 increase?

The healt impact of increased NO_2 emissions is largely uncertain, but it may be important in near-source exposure, as NO_2 is a more toxic gas than NO. NO_2 levels are regulated in occupational health legislation. *Source: DieselNet Mail, February 2005 (www.dieselnet.com).* Short-term exposure of exhaust gases are highest in some working environments, like warehouses or mines, where employees work close to machinery or vehicles. The aftertreatment technologies have been adopted in the diesel machinery operating in the underground mines. The US National Stone, Sand and Gravel Association (NSSGA) points out that DPFs coated with platinum- based catalysts are not ready for the underground diesel market. Catalysts help with one health problem, but create another, increased exposure to NO_2. NSSGA has given statements expressing concern about DPFs saying that NSSGA cannot support DPFs until the NO_2 issue is resolved and other concerns, including but not limited to their durability and reliability are determined. *NSSGA comments to the Mine Safety and Health Administration (MSHA) - proposed rulemaking on Diesel Particulate Matter (DPM) Exposure to Underground Metal and Nonmetal Miners, April 5, 2004 (www.nssga.org).*

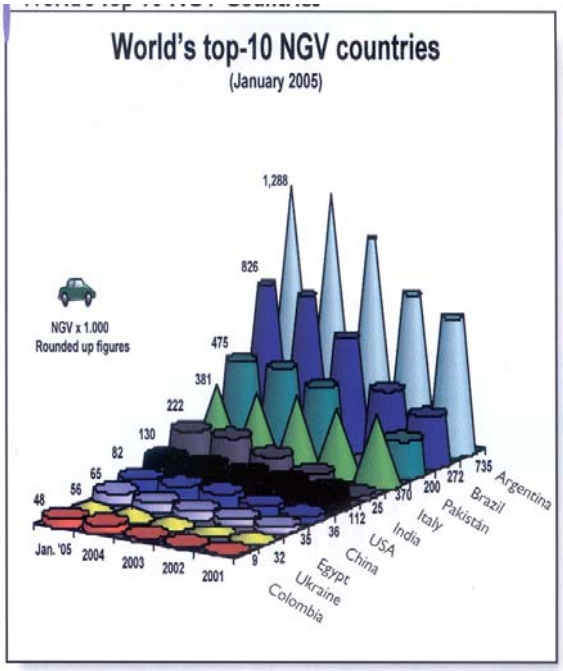
NATURAL GAS AND LPG (and biogas)

Scania's busses operating on biogas and natural gas

Scania extends its modular range of city and intercity buses with a gas-fuelled version of the Scania OmniLink. Scania's 260 hp 9-litre engine has been converted to operate on gas. Running on either natural gas or biogas, the engine is equipped with an oxidising catalyst. Already now, the exhaust emissions of Scania's gas engine are at the level of Euro 5, which becomes mandatory in 2009.
Source: Press release 02-03-2005 (www.scania.com)

World's top NGV countries

Argentina is world leader in the use of natural gas in transportation and continues to convert 20,000 gasoline vehicles to natural gas each month. Italy is NGV leader in Europe. *The GVR, Gas Vehicles Report, Volume 4, number 38, March 2005.* It is expected that number of new converted NGVs in 2005 will be 1 million. *NGV Global March 9 2005-03-31*



Source: The GVR, Gas Vehicles Report, March 2005.

NG engine meeting US 2010 requirements

Cummins Westport will work with NREL to develop natural gas engine meeting US 2010 regulations without aftertreatment system. Commercial launch of engine is expected in 2007. *DieselNet Feb 2005.*

New York City Transit strategy from CNG to hybrids?

The MTA New York City Transit will have 325 hybrid diesel-electric buses by the end of 2005 (world's highest fleet of diesel hybrids). MTA runs 4512 busses, including 481 CNG buses. MTA clean bus program originally relied on two bus technologies: hybrids and CNG. Special facilities and maintenance of CNG busses are expensive, and they consume more fuel. Hybrid buses cost $125,000 to $200,000 more than regular diesel buses, but this is covered by savings on fuel. Emissions from CNG and hybrid diesel-electric buses are practically equivalent. *DieselNet Mail, March 2005. Follow (www.dieselnet.com).*

Autogas prospects in Europe

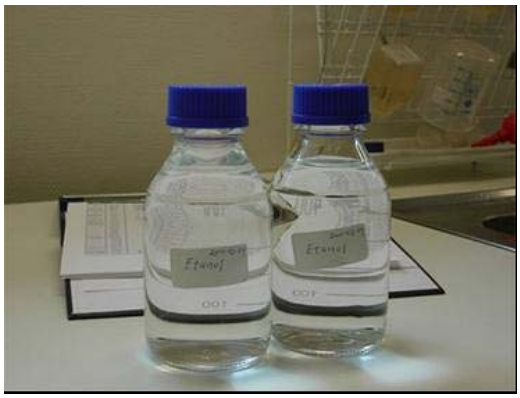
Partic Segarra from the European LP Gas Association evaluates Autogas prospects in Europe. Growth of LPG markets is slowing down in e.g. Italy and France, but growing rapidly in Eastern Europe. Mr Segarra points out that the key for market growth is confidence on

long-term support. In the new markets, like in Poland or Czech Republic, LPG share is originally low and thus offers good potential to grow. For market growth it is essential that tax exemptions provided to LPG in Europe will be maintained. In addition, information on LPG vehicles should be easily available, both onr factory manufactured and on retrofitted cars.
Autogas Updates N°16 Spring 2005.

ETHANOL

First drops of ethanol

The first drops of ethanol have been produced in the Örnsköldsvik pilot plant. The Swedish pilot plant in Örnsköldsvik for developing the process of making ethanol from wooden biomass was inaugurated in May 2004. The work during 2004 has concentrated on solving various technical problems and improving the facility. In February this year, spruce wood was hydrolysed by the dilute acid hydrolysis process and the first ethanol has been produced. *Source: via Lars Vallander, STEM, Sweden.*



Source: *http://www.etek.se/*

Scania – ethanol buses

Scania has been successful on the Swedish bus market, selling 283 urban and interurban buses since the beginning of 2005. The biggest single order is for 123 ethanol-fuelled suburban buses to Storstockholms Lokaltrafik, the public transport operator in greater Stockholm. The deal is yet another move in Stockholm's ambition since 15 years to run its public transport system without fossil fuels. For Storstockholms Lokaltrafik (SL), the deal means a continued investment in environmentally adapted public transport. Stockholm already has the world's largest fleet of ethanol buses, which operate mainly in the inner city. The new buses will be put into suburban operation during autumn 2005. When deliveries are concluded in early 2006, around 350 ethanol buses will be operating in the SL fleet.

"Since 1990, Scania has supplied around 450 ethanol buses to Swedish cities, of which more than 200 are rolling in the inner city of Stockholm. The ethanol buses to SL are equipped with Scania's 9-litre 230 hp ethanol engine, which since many years has exhaust emissions equivalent to Euro 4. Ethanol is produced from biomass and is thus a renewable fuel." *Press release 02-03-2005.* (www.scania.com).

O2Diesel as Alternative Diesel Fuel in Brazil

Brazil's National Petroleum Agency ("ANP") has approved O2Diesel(TM) as an alternative diesel fuel for use in bus, truck and offroad fleets. O2Diesel(TM) is an ethanol-diesel fuel, which contain up to 10% ethanol. The ANP approval follows eight months of thorough evaluation of the emission and performance data from O2Diesel(TM) tests in the US and Brazil. Without APN's approval, fuel that does not conform to the specifications for standard diesel fuel cannot be sold in Brazil, and O2Diesel(TM) is presently the only ANP-approved alternative diesel fuel. O2Diesel plans to start its captive fleet test program in the city of Rio de Janeiro, in April 2005. NEWARK, DE, Mar 30, 2005. (*www.o2diesel.net*).

Increasing demand for E85

- American demand for ethanol will increase dramatically over the next few years. There are already four million vehicles currently on-road ready to run on E85. *GAVE 3/2005. (www.gave.novem.nl)*
- Rotterdam local authority plans to include Ford (Focus) flexi-fuel vehicles (FFV) in its fleet of cars. These FFVs can run on E85, as well as on traditional petrol. *GAVE 4/2005. (www.gave.novem.nl)*

BIOESTERS

SRMs to Biodiesel: a Biosafety Workshop

A team of leading international experts is examining the potential of rendering specified risk materials (SRMs) into feedstock for biodiesel production. The study, conducted under the IEA's Implementing Agreement on Advanced Motor Fuels, evaluates the possible risks to human and animal health from using SRMs as a biodiesel source. It also examines the prion deactivation potential of both the biodiesel production and combustion processes and knowledge gaps that need to be addressed through experimental work. Biodiesel production from high-risk or potentially BSE-infected tallow could present a safe and environmentally friendly alternative to disposal, while recovering value from currently wasted animal fats. In addition, the price of biodiesel may be reduced by exploiting this low-cost source.

ATF Advanced Technologies & Fuels Canada Inc. will be hosting a workshop where authors will present the findings from their final report on June 21, 2005, in Ottawa, Canada. In conjunction with the release of the report, the Canadian Food Inspection Agency will host a separate one day workshop on environmental decontamination and the disposal of TSE materials on Wednesday, June 22, 2005. For details on SRMs to Biodiesel: a Biosafety Workshop please email *biodiesel@atfcan.com* or visit *www.atfcan.com*.

AMFI 1/2005 issue included Survey of Biofuels Policy in Europe, continuation: EC has sent a notification to Belgium, Italy, Luxembourg, Poland and Slovenia on lacking national reports. In addition, Cyprus and Estonia's reports do not contain target values, and France and Portugal did not report definitive targets.
New targets: Sweden has confirmed 3%, Malta 0.3% and Greece 0.7%. Updated overview of targets: *http://gave.novem.nl/figuur025/bioimpl.htm*

Correction: Target value in France is 1.2% for 2005, not 2%

U.S. Navy calls for broad use of biodiesel at its facilities

The U.S. Navy announced that they will increase the use of biodiesel. All Navy and Marine nontactical diesel vehicles must operate on a blend of 20% biodiesel fuel (B20) from June 1, 2005. *AltFuels Advisor,* April 01, 2005.

SYN- AND SUNFUELS (GTL, BTL)

Black liquor gasification unit inaugurated in Piteå, Sweden

A pilot plant for gasification of black liquor from kraft pulp manufacturing was inaugurated on 23 February 2005 in Sweden, in the northern town of Piteå. The plant is based on the Chemrec gasification technology and it will be used to develop the process. The gas will eventually be used to produce electricity and/or motor fuel (e.g. DME, methanol, FTD, H2). The plant was inaugurated by the Swedish energy minister Mona Sahlin and the gathering was attended by several stakeholders representing forestry, pulp manufacturing, utilities, research, car manufacturing and government. *Source: via Lars Vallander, STEM, Sweden.*

Other GTL and BTL issues

The SunDiesel fuel (BTL) using FT process of synthesis gas obtained by gasification of biomass, is developed by DaimlerChrystler in partnership with Volkswagen. The fuel is produced by Choren in Freiberg (Saxony). The pilot plant will start with an annual capacity of 13,000 metric tons this year. A plan of commercial plant with a capacity of 200,000 tons/year would open in 2008. Originally Volkswagen and DaimlerChrysler started separate projects on BTL-technology, Volkswagen's "SunFuel" and DaimlerChrysler's "Biotrol". Nowadays both companies work together with Choren, who has developed and patented a "Carbo-V®" gasification process. One estimate states that BTL may replace up to 13% of Germany's current diesel use. *www.greencarcongress.com.*

OTHER ADVANCED FUELS (HYDROGEN, DME)

Hydrogen from ethanol for hybrid vehicles

Iowa's Senator introduced a bill of $5 million over three years to demonstrate the cost-effective production of hydrogen from ethanol and other farm-based fuels. This could help converting ethanol into hydrogen for use in hybrid electric vehicles. *AltFuels Advisor, April 01, 2005.*

World's first fuel-cell motorbike

The first purpose-built FC motorbike was unveiled at the Design Museum. The bike is developed by Intelligent Energy, the British company. There are certain limitations in the use of bike: top speed is only 50 mph and just one hydrogen refuelling station available in Essex. In addition, artificial engine noise may be also needed because the electric motor is too quiet to be heard by pedestrians. (*www.gasandoil.com*). The hydrogen filling station that will be opened in Essex in April 2005 is the first one in UK. It will serve three prototype buses operated by Transport of London. *www.e4engineering.com, April 11, 2005.*

Methane hydrate in Japan

In Japan, researchers are striving to commercialize the use of methane hydrate as an alternative fuel by around 2016. Methane hydrate, a combination of methane and ice, is deposited in low-temperature and high-pressure areas beneath the ocean floor and in permafrost regions. Researchers are looking into developing technologies to produce natural gas from methane hydrates. A lot of methane hydrate is believed to exist in the seas surrounding Japan. It is planned to complete extraction tests from by 2011 with the aim of achieving commercialization in 2016 or after. Japan is leading the world in this area, it has developed e.g. a container that can store samples under low-temperature and high-pressure conditions. In the 1990s, Tokyo Gas Co.'s Frontier Research Institute began studying ways to store and transport methane hydrate. Hokuriku Electric Power Co. is looking into how to deal with the carbon dioxide that emerges when methane is released from the hydrate. Methane hydrate won't be able to meet all energy demands but will be a potent alternative energy to oil, Sugihara said. *The Japan Times: Jan. 19, 2005*. (*search.japantimes.co.jp*)

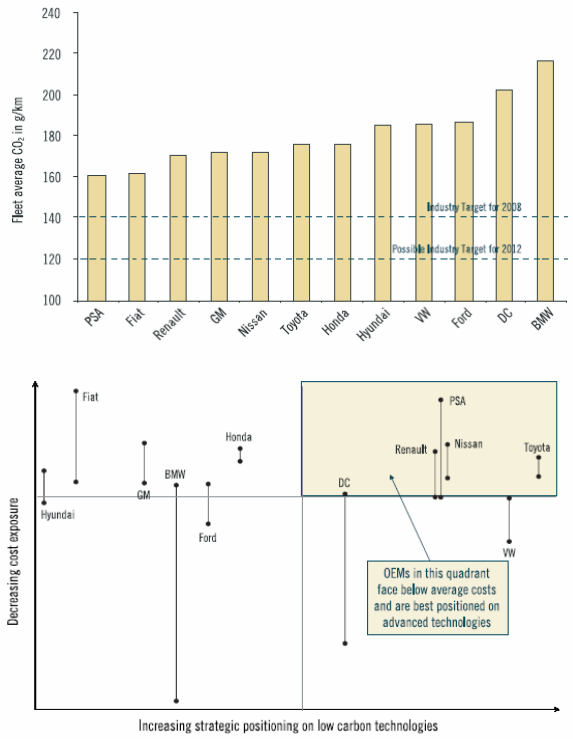
Standardisation of Alternative Fuels

The CEN working group "Liquid and Gaseous Alternative fuels" (CEN/BT/WG 149) states that following standards are urgently needed (recommendation to CEN/TC 19): 1) Neat FAEE and 5% blends in diesel oil 2) E10 and E15 as ethanol/gasoline blends 3) alcohol-diesel blends 4) GTL from natural gas 5) fuel ethanol (E95 with additives for diesel engines) 6) Biogas. On a longer term, the following standards would be needed: 30% of FAME in diesel fuel, BTL diesel from gasified biomass, DME, neat methanol (M100), CNG, methanol blends in gasoline (M85) *ENGVA News, December 2004.* ENGVA, IANGV, UN and ISO, GCG are aiming at harmonization of gaseous fuel vehicle standards (natural gas and hydrogen). This would include whole concept of vehicles, fuel infrastructure and fuels. ISO will hold a workshop on this late 2005 or early 2006. *ENGVA News January&February 2005*. ENGVA is engaged with a group lead by the European Hydrogen and FC Technology Platform on the international standards for hydrogen, CNG and LPG.
Note: Standardization issues were handled in the IEA/AMF Annex XXVII, 2 downloadable public reports. (*www.iea-amf.vtt.fi*)

Future of diesel

Automotive News Europe reports that share of diesel cars will be some 65% of European new-car sales by 2010, but fall below 40% after 2015. Diesels held 24.8% of western European new-car sales in 1998, but last year 48.3%. Rinaldo Rinolfi from Fiat Research Centre points out that to meet the Euro 5 emission limits by 2010 diesels will need costly equipment. This may lead to diesel share below 40% of the European market after 2015. *http://www.cngvp.org/news_detail.html March 23, 2005.* WestStart's Clean Fuels and Technologies Market Survey pointed to a similar decline in diesel use due to concerns in increased cost and reduced efficiency of diesel engines when struggling with the new emission limits, and the next challenge, oil supply, will follow. By 2020 diesel could loose 35% of the new HDV market to e.g. hybrids, natural gas, hydrogen, and diesel alternatives like biodiesel and GTL fuels. *http://www.cngvp.org/news_detail.html*, *March 17, 2005*

TIAX and Global Insight released a study "The Future of Heavy-Duty Powertrains", which predicts that HCCI will power nearly 40% of HDVs by 2020, and 15-25% of HDVs will represent either hybrid electric or hydraulic hybrid technology. *www.globalinsight.com, March 7, 2005.*



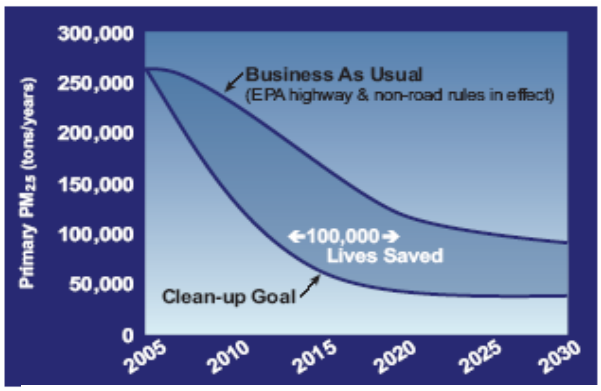
Toyota seems to be in the best position to meet ACEA 2008 CO_2 target according to *WRI&SAM report "Are investors driving blindly? March 2005. http://pdf.wri.org/acea_driving_blindly.pdf*

Emissions

- The European Commission working paper recommends incentives for cars with PM below 5 mg/km, lower than current Euro 4 limit. Based on this, Germany will apply tax incentives for new and PDF retrofitted cars. Mercedes-Benz announced of equipping their diesel cars with particulate filter beginning from Summer 2005. *DieselNet Mail, January, February and March 2005. (www.dieselnet.com).*
- In Japan, year 2009 emission standards reached concensus of panel. The limits would be same for diesel and gasoline cars, and would reduce PM and NOx by 43-65% relative to the 2005 standards. The 2009 PM limit would be 5 mg/km (Euro IV 25 mg/km) and NO_x limit 0.08 g/km (Euro IV 0.25 g/km) for cars (<1250 kg). Limits for trucks and busses (>3.5 tons) would be NO_x 0.7 g/kWh and PM 0.01 g/kWh. *DieselNet Mail, February 2005. (www.dieselnet.com).*
- Car companies are not disclosing CO_2 reduction strategies to achieve ACEA target for cars sold in EU (CO_2 140 g/km by 2008, possibly 120 gCO_2/km by 2012). ACEA target is voluntary, but EC stated that it will regulate the industry if it fails to meet the target. The WRI and SAM report examines how this lack of disclosure could impact carmakers. The companies analyzed are BMW, DaimlerChrysler, Ford, Volkswagen, Hyundai, Fiat, PSA Peugeot Citroën, Renault, General Motors, Nissan, Toyota and Honda. Toyota seems to be in the best position to meet ACEA 2008 CO_2 target (see Figure). *Publication: Transparency Issues with the ACEA agreement: Are investors driving blindly? March 2005 (www.wri.org)*

PUBLICATIONS

- ◊ The IEA brochure on Transport now available in the IEA webpage. IEA Technology Brief: Transport, Dec 2004. (*www.iea.org*, *follow link*)
- ◊ Alternative fuels: An Energy Technology Perspective, EET/2005/01, Paris, March, 2005. A paper presented at the IEA workshop on Technology Issues for the Oil and Gas (13-14 January 2005) and IEA Committee on Energy Research and Technology (CERT), 1-2 March 2005. (*www.iea.org*, *follow link*)
- ◊ World Energy Outlook – Focus on Transport. Presentation at the IEA Workshop: Managing Oil Demand in Transport, Paris, 7-8 March, 2005. (*www.iea.org*, *follow link*)
- ◊ Compatibility of pure and blended biofuels with respect to engine performance, durability and emissions. A literature review. Report 2GAVE04.01. TNO Automotive. (*www.novem.nl*, follow *link*)
- ◊ Evaluation of alternative fuels and technologies for buses in Mumbai. Prepared for Department for Transport, Government of UK. TERI Project Report No. 2001 UT 41. 2004.
- ◊ Diesel and Health in America: The Lingering Threat. February 2005. (*www.catf.us, follow)*
- ◊ Ambient Air Quality in Europe: The regulators multi pollutant, multi-effect strategies: the EU CAFE programme, the UNECE EMEP programme, Briefing Paper - November 2004. Summary of the present status of CAFÉ and EMEP programmes, their political, legal and strategic linkages and potential impact on the internal combustion engine industry in the years to come. (*www.euromot.org*, *follow link*)



Source: Diesel and Health in America. www.catf.us

IEA & IEA/AMF News

Call for workshop participation: Policies for the Diffusion of Innovative and Sustainable Transport Technologies -

The IEA End Use Working Party (EUWP) initiated an investigation in policy recommendations from transport-related Implementing Agreements (IAs). Over the past several months, this investigation has been presented to most of the concerned IAs at their respective ExCo meetings by the EUWP Vice Chair for transport, where it has received great attention. As promised during these presentations a workshop is planned to gather the results of these queries. This workshop will take place on 1 - 3 June in Zurich, Switzerland. It is organised in collaboration with the Centre for Energy Policy and Economics (CEPE) of the Swiss Federal Institute of Technology Zurich and the IEA Secretariat. It is termed "Policies for the Diffusion of Innovative and Sustainable Transport Technologies".

The IEA Secretariat has set up a website where further details can be found and important documents downloaded, in particular the updated rationale and its questionnaire (Background Information) and the IEA Workshop Announcement with important practical details. This document contains, besides a preliminary programme, a list of nearby hotels and a registration form, some guidance, inspirations and suggestions for the structure and content of the contributions. The internet address where these documents can be downloaded is as follows: www.iea.org/Textbase/work/workshopdetail.asp?WS_ID=212.

The workshop participation is limited to delegates, operating agents and other scientists actively involved in technology issues of the transport-related IAs who contribute to the workshop with a presentation. The purpose of this procedure is to facilitate the exchange among specialists. A few policy specialists will also participate, and hopefully stimulate the discussion.

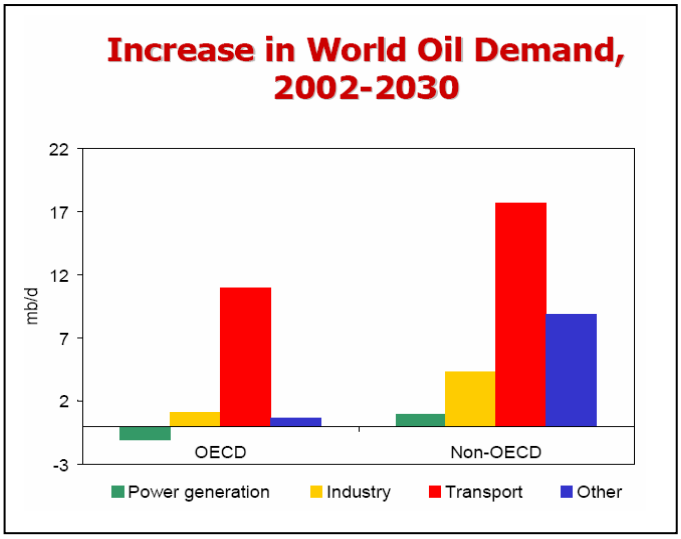
During the preparation of the workshop it has become increasingly obvious that policy issues are not easily grasped by technologists. Yet on the other hand it is the general purpose of the IEA to provide governments with suggestions on how to solve the more and more pressing problems of energy supply security, emission reduction and economic development. The EUWP considers this workshop as an experiment for an increased communication between technology RD&D and policy makers. We therefore hope for a strong participation also from this IA and look forward to meet you in Zurich.

Peter Finckh
EUWP Vice Chair for the transport sector

IEA Workshop: Managing Oil Demand in Transport

IEA together with ECMT (European Conference of Ministers of Transport) organized IEA Workshop: Managing Oil Demand in Transport, Paris, 7-8 March, 2005. *Presentations available on www.iea.org.* IEA/AMF secretariat Claes Pilo participated the Workshop.

Presentation "World Energy Outlook – Focus on Transport" summarized findings on transportation from the most extensive energy publication "World Energy Outlook 2004". This presentation pointed out that world energy demand in transport will climb faster than any other end-use sector. Thus most of the increase in oil demand comes from the transport sector – especially in OECD countries. However, transport oil demand in non-OECD countries will increase three times more than in the OECD. Also share of transport in global CO_2 emissions will increase, estimated to account for a quarter of increase from 2002 to 2030.



Source: IEA Workshop: Managing Oil Demand in Transport, March 2005. Presentation: World Energy Outlook – Focus on Transport; available on www.iea.org.

New policies could change these scenarios significantly. If "Alternative Policy Scenario" would be implemented instead of "Reference Scenario", this would save world oil demand in 2030 by 12.8 mb/d, which would be equivalent to the combined current production of Saudi Arabia, United Arab Emirates and Nigeria. "Alternative Policy Scenario" lists the following policies:

- Improve vehicle fuel efficiency (e.g. strengthen of US CAFE, prolongation of Chinese standards)
- Increased sales of alternative fuel vehicles and fuels (e.g. biofuels in Europe, Brazil)
- Mode switching (e.g. increased high speed rail in Japan)

IEA/AMF Annual report 2004 published

IEA/AMF Annual report 2004 published (*follow link*). Annual Book 2004 includes i.a. summary of an End-of-Term Report for the period 1999-2004, which was presented to and approved by the IEA End-Use Working Party (EUWP) in March 2004. This report summarizes e.g. that altogether, 25 Annexes have been completed since the IEA/AMF IA started in 1984 and 7 Annexes are presently running. A Strategic Plan for the period 2005-2009 that was approved by the IEA Committee on Energy Research and Technology (CERT) in June 2004 is also summarized in the Annual Report.

Update of AMF website

◊ "Annex Info" of all Annexes is updated, e.g. publication lists are harmonized. Operating Agents are recommended to visit website to check the changes.

◊ IEA/AMF Annual report 2004 is available on website ("Downloadable" area).

◊ Corrections, feedback and suggestions how to improve the AMF website are wellcome.

Dr. Roberta Nichols passed away peacefully April 3rd in Los Angeles. Dr. Nichols was retired from Ford Motor Company, where she worked as manager in the development of alternative fuel vehicles for 16 years. During recent years she worked internationally as Alternative Fuels Consultant.

Dr. Nichols has been a central person in ISAF (International Symposia on Alcohol Fuels) since 1979 in Asilomar, California. In 1982 in Auckland, New Zealand, she became member of the ISAF International Organizing Committee (IOC) and later in its Operations Group. Dr. Nichols has had a strong influence on the development of ISAF and took active part only a few weeks before her death in the preparations of ISAF XV to be held in San Diego 26-28 September this autumn. Dr. Nichols was a key person in the area of alternative motor fuels - well known and admired around the world. We are grateful for her ambition and ability to look into the future of alternative fuels and vehicles and for her strong, never-ceasing spirit.

Claës Pilo
Chairman of ISAF/IOC

AMF Delegates

Canada
Natural Resources Canada, Ottawa
Mr. A. Beregszaszy
tel: +1 613 996 8557
aberegsz@nrcan.gc.ca

Denmark
Technical University of Denmark (DTU)
Mr. J. Schramm
+45 45254179
js@mek.dtu.dk

Finland
VTT, Espoo
Mr. N.-O. Nylund
tel: +358 400 703715
nils-olof.nylund@vtt.fi

France
ADEME, Valbonne
Mr. P. Coroller
tel: +33 4 9395 7932
patrick.coroller@ademe.fr

Italy
Agip Petroli Centro Ricerche EURON, San Donato Milanese
Mr. F. Giavazzi
tel: +39 02 5205 6421
fulvio.giavazzi@euron.eni.it

Japan
NEDO, Tokyo
Mr. S. Tonomura
tel: +81 44 520 5280
tonomurasga@nedo.go.jp

LEVO, Tokyo
Mr. K. Tanigawa
tel: +81 3 3359 8461
k-tanigawa@levo.or.jp

Spain
IDAE, Madrid
Mr. C. López-López
tel: +34 91 456 4994
carlopez@idae.es

Sweden
STEM, Eskilstuna
Ms. A. Kempe
tel: +46 16 544 2092
alice.kempe@stem.se

Switzerland
University of Applied Sciences, Bern
Mr. J. Czerwinski
Tel: +41 32 331 6426
jan.czerwinski@hti.bfh.ch

United Kingdom
Department for Transport, London
Mr. C. Parkin
tel: +44 20 7944 2958
chris.parkin@dft.gsi.gov.uk

USA
DOE, Washington, DC
Mr. S. Goguen
tel: +1 202 586 8044
stephen.goguen@hq.doe.gov

Contact information – AMFI Newsletter

TEC TransEnergy Consulting Ltd.
Ms. Päivi Aakko
Tekniikantie 14
FIN-02150 Espoo, Finland

Tel +358 9 251 72360
Fax +358 9 251 72361
info@teconsulting.fi
www.teconsulting.fi