

of heavy vehicles straight from the vehicle.

More information: VTT processes, Engine technology. Mr. Nils-Olof Nylund.
Tel. +358 (0)9 456 5518; e-mail: nils-olof.nylund@vtt.fi

NEWS FROM THE IEA

IEA Information Centres meeting

On May 3rd, a meeting was organised between the IEA Information Centres of seven Implementing Agreements: AIVC (Air Infiltration and Ventilation Centre), Clean Coal Centre, EETIC (Energy and Environment Technologies Information Centre), ETDE (Energy Technology Data Exchange), Heat Pump Centre, ICGTI (International centre for Gas technology Information) and IEA AMF/AFIS.

The reason for this meeting was twofold: getting to know each others activities to avoid duplication in activities and to gain insight in possibilities for future co-operation. The second reason is that participation in Information Centres is declining. The meeting was held to share experiences and to discuss possibilities to halt this decline in interest.

Each participant agreed to formulate and make a SWOT analysis for its information centre, after which operating strategies can be formulated. The Information Centres will keep each other informed about relevant developments and will meet on a regular basis, for example every other year.

An updated brochure of the IEA Information Centres can be downloaded from:
http://www.iea.org/impagr/brochure/ia_info_aug02.pdf.

3rd Workshop Deployments Strategies for Hybrid, Electric & Alternative Fuel Vehicles

June 10, 2002 the 3rd workshop of the annex 'Deployment Strategies for Hybrid, Electric & Alternative Fuel Vehicles' was held. This workshop enables getting a wider horizon by inviting experts from outside the Annex. Moreover special topics arising from the work on the evaluation of promotion measures are discussed among the experts in an informal and frank exchange of points of view.

Among the presentations and studies discussed were:

- The OECD Task Force on Low Emission Issues: Implementation issues, by Mr. Antonio Matucci of ENEA, Italy;
- Do Governments Learn? The Example of the Action Program Energy 2000, Switzerland, by Stefan Rieder, INTERFACE, Switzerland;
- Can Local Initiatives Influence national Policy? The Austrian Car-free Tourism resorts Project as an Example, by Willy Raimund, E.V.A. Austria;
- Demonstration projects; The road to success, by Mikael Fjällström, Stem, Sweden.

For more information, please contact the presenters directly or contact Ms. Sigrid Kleindienst Muntwyler, e-mail: smuntwyler@solarcenter.ch; phone: +41-31-9115061

AMF delegates

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

Denmark
Haldor Topsøe A/S, Lyngby
Mr. S.-E. Mikkelsen
tel: +45 4527 2379
sem@topsoe.dk

Finland
VTT, Espoo
Mr. N.-O. Nylund
tel: +358 9 456 5518
nils-olof.nylund@vtt.fi

France
ADEME, Valbonne
Mr. P. Coroller
tel: +33 449 395 7932
patrick.coroller@ademe.fr

Italy
Agip Petroli S.P.A., San Donato
Mr. F. Giavazzi
tel: +39 02 5205 6421
fulvio.giavazzi@euron.eni.it

Japan
NEDO, Tokyo
Mr. S. Tonomura
tel: +81 3 3987 9436

LEVO, Tokyo
Mr. T. Shimode
tel: +81 3 3359 8461
t-shimode@levo.or.jp

Spain
IDEA, Madrid
Mr. C. López López
tel: +34 1 456 84 15
carlopez@idea.es

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

United Kingdom
DETR, London
Mr. C. Parkin
tel: +44 20 7944 2958
chris.parkin@dtlr.gsi.gov.uk

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

IEA AMF/AFIS Fuels Update

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Newsletter on automotive fuels for the members of the
Implementing Agreement on Advanced Motor Fuels of the
IEA (IEA AMF)

Colophon

Fuels Update is released under the authority of the Implementing Agreement of the Advanced Motor Fuels Agreement of the International Energy Agency. Fuels Update, issued by IEA AMF/AFIS, gives short summaries on recently published articles, reports and books in the field of (advanced) motor fuels, without giving any rating to the information presented.

For your comments, suggestions or when you have news items that you wish to get known among the IEA AMF members and a wide variety of organisations working in the field of automotive fuels please contact:

*Innas BV,
Annemarie van Malsen,
Nikkelstraat 15,
4823 AE BREDA,
The Netherlands.
tel: +31 (76) 542 4080
fax: +31 (76) 542 4090
e-mail avmalsen@innas.com
Here you can also obtain a PDF copy of this newsletter.*

This newsletter is distributed by the delegates of the participating countries of IEA AMF, who are listed on page 4.

IEA report: enormous pressure on global environment

57% raise in fuel demand expected by 2002

"We are not on a sustainable energy path unless we make considerable changes," said Robert Priddle, Executive Director of the IEA at the presentation of the document *Toward Solutions: Sustainable Development in the Energy Sector* on May 28. The IEA Member countries endorsed the document and its 25 specific recommendations as a contribution to the World Summit on Sustainable Development of 26 August - 4 September in Johannesburg.

The IEA notes that a projected 57% increase in mainly fossil fuel based energy demand over the next 20 years will exert enormous pressure on the global environment. Huge investment demands, continued distortions in energy markets, growing problems caused by the insatiable demand for transportation, and barriers to deployment of renewable energy technologies, all point to a need for countries to do more.

World oil demand

In *Toward Solutions: Sustainable Development in the Energy Sector*, the IEA shows how the principles of sustainable development can be applied in the energy sector and looks at eight different areas, one of them being sustainable transportation. By 2020, transport is likely to account for more than half of the world oil demand and roughly one quarter of global energy-related CO₂ emissions, and result in considerable local air pollution. Transport will grow faster than any other end-use sector, and the growth of demand in non-OECD countries is expected to be three times higher than in the OECD. However, OECD countries will remain the greatest energy users in transport.

Therefore, the IEA member countries affirm that:

- improvements in fuel economy should be promoted, including through technological advancements and policies such as infrastructure pricing, innovative toll systems, priced parking and management of freight deliveries;
- appropriate institutional structures should be promoted to develop and communicate local, regional and national transport policies;
- international funding organisations should place a high priority on supporting the expansion of effective transportation in developing countries. Renewable energy should also play an increasing role.

The world has made little progress on its energy consumption in the last decade, with people still relying mostly on fossil fuels for power. Renewable energy accounts for 1% of the world's supply, while fossil fuels provide about 85%.

cost

The longstanding barrier of cost remains a continuing problem for greater use of renewables. Although prices for solar and wind power have fallen, their prices remain high relative to fossil fuels, whose prices have stayed low. And technological advances have helped to

lower costs both for renewables and fossil fuels. Industrialized nations consume most of the world's fuel. The United States consumes 354 mm Btu and Western Europe uses 170 mm Btu, while India consumes 12 mm. By 2050, the world may use 15 times as much energy as it did in 1950, said Shell Chairman Phil Watts. Developing countries will account for most of that increased consumption.

Sources: *Environment and Energy Daily* www.eenews.net/; IEA Public Information Office; tel: +33(1) 405 765 00/01; fax: +33(1)405 765 5. Press contact: Fiona Davies, phone: +33(1) 405 765.50; fiona.davies@iea.org. The brochure and a flyer of the World Summit can be downloaded from the IEA website: www.iea.org.

PUBLICATIONS

Energy statistics

IEA just released a new version of Key World Energy Statistics 2002. This free publication offers timely, clearly presented data on the supply, transformation and consumption of all major energy sources.

PDF download from: www.iea.org



HYDROGEN

Japanese filling station

The Japanese Showa Shell is building the world's first hydrogen filling station for passenger cars in the city of Tokyo, in 2003. The station is one of the 5 stations that will be built in the next year for a hydrogen and fuel cell demonstration project. At the service station, several prototypes of buses and fuel cell passenger cars can be filled up with liquid or compressed hydrogen. Toyota will be one of the auto makers in the project to introduce prototype vehicles on the Japanese market.

Toyota

Toyota began testing the FCHV-4 on public roads in Japan in June 2001 and a month later in the US. This is a passenger car powered by hydrogen stored in high-pressure tanks and featuring the Fuel Cell Stack developed by Toyota. The company believes such tests will help establish the infrastructure needed for the public acceptance of fuel cell cars and the use of hydrogen as a fuel.

Another Toyota model however, the FCHV-5, uses a new low-sulphur fuel called hydrocarbon fuel (CHF) and an on-board reformer to produce hydrogen from it. The key benefit of CHF, which is produced from crude oil, natural gas or coal and can be used in current internal combustion engines, is that it can be supplied through the existing service station infrastructure. CHF would then be used for fueling fuel-cell vehicles, as well as current gasoline-powered cars.

Sources: *Stromen*, 9 August 2002; *Automotive Engineer* July/August 2002.

LPG

Dutch LPG cars diminishing

The number of passenger cars running on LPG is decreasing on the Dutch roads. In 1991, 584.000 cars were having an LPG tank, in 2001, the number decreased to 323.000. In the same period of time, the number of diesel-fuelled cars raised with 320.000. Diesel cars are getting more popular because of better driveability. Unlike diesel cars, cars running on LPG cannot lose their negative image. LPG cars are still believed (wrongfully) to have bad engine performance.

Source: *Stromen*, 30 August 2002.

GASOLINE

Reducing leaded fuel in southern Africa

The efforts to reduce leaded fuels and harmful emissions in southern and South Africa is getting more successful, according to a BP spokesman. A combination of government commitment, oil industry initiative, technology and public awareness programs has greatly increased the usage of replacement-fuel and lead-free petrol to keep the country on track for the January 2006 phase out of leaded fuels.

BP's initial effort centred on unleaded fuel, a project that started out successfully but eventually petered out due to wide spread confusion and the limited viability of unleaded fuel. On the other hand, the level of usage of lead-replacement petrol has risen by 10% in the last 7 months alone and continues to grow.

"Oil companies have traditionally focused on newer cars (...). But what we found in Africa, and what holds true in most of the developing and even parts of the developed world, was that the majority of cars were either between 8 and 10 years old, or 15 to 20 years old. Those cars can't use unleaded, and when they do the engine valves recede."

potassium

The eventual introduction of lead-replacement fuel, which provides the needed higher octanes through the addition of safe chemicals like potassium, fared much better. The South African government's commitment to lead-free fuels by 2006 added much needed impetus to the efforts, according to BP.

Source: *Gulf News Online* 2 Sept.

BIOFUELS

Dutch biofuel plant

The plans for a test biofuel plant in the northern Netherlands are almost concluded, now that the European Parliament decided in favour of a proposal to refrain from taxes on biodiesel and acknowledged cold pressed oils such as rape seed oil as biofuels. The European Commission aims for a 20% replacement of regular fuels by biofuels in 2020.

Source: *Stromen*, 12 July 2002.

DME

DME project to begin in Japan

DME Development Co., a consortium of eight Japanese companies and TotalFinaElf, announced recently it will begin a government-subsidised project to develop

direct synthesis technology for dimethyl ether (DME).

The project will involve running a pilot plant that directly synthesizes 100 tons/day of DME from synthesis gas (carbon monoxide and hydrogen) manufactured from natural gas. The companies will then conduct a feasibility study on a commercial DME plant with a capacity of 2,500 tons/day. The consortium will design, fabricate, construct and perform commission tests on the pilot plant during this and next year, and will run the plant on an experimental basis from 2004 to 2006.

Source: *Oxy-Fuel News*, August 19, 2002.

<http://www.total.com/fr/>
<http://www.sanso.co.jp/indexe.htm>
<http://www.toyotsu.co.jp/English/index.html>
<http://www.hitachi.co.jp>
<http://www.marubeni.co.jp/>

DIESEL

EPA issues Off Road vehicle standards

The US Environment Protection Agency (EPA) has issued new emission standards for the engines of off road vehicles, including snowmobiles, motorcycles, all terrain vehicles and recreational diesel powered boats.

The EPA projects that the new standards for all vehicles, when fully implemented in 2020, will cut annual HC emissions by 72%, reduce NOx emissions by 80%, and cut CO emissions by 1.3 million tons, about a 56% reduction.

Environmental groups believe EPA missed an opportunity to slash emissions from certain off road vehicles, particularly snowmobiles and dirt bikes. For example, the new EPA

regulations require snowmobile manufacturers to reduce hydrocarbon and carbon monoxide emissions from current levels by 30% in 2006, and 50% in 2012.

However there are vehicles on the market that already far exceed that requirement. These vehicles have a cleaner burning four stroke engine which reduces HC emissions by 80% when compared to current two stroke models. And a modified two stroke engine developed at Colorado State University reduces HC by 88% and carbon monoxide by 99% by using a filter similar to a catalytic converter.

Source: *Environment News Service*, Sept, 17, 2002.

AMF MEMBERS

VTT research lab

Late March 2002, VTT, Technical Research Centre of Finland, opened a new research laboratory for research on heavy duty vehicles. It focuses on truck and bus energy and emissions research.

The laboratory enables advanced engine exhaust emission measurements in accordance with the latest EU HD emission directive. The new laboratory's main devices are a heavy chassis dynamometer for vehicle measurements and a transient engine dynamometer for engine measurements, including exhaust emission measurement equipment for both devices.

transient type

With the new equipment, it will be possible to conduct transient type engine and vehicle measurements, i.e. tests which simulate engine load changes similar to situations in normal traffic. It will also be possible to measure the particle emissions