

AMFI Newsletter



Aviation Biofuels find interest around the globe
([Alternative Aviation Fuels](#))

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

The AMFI releases four electronic newsletters each year.

A group of authors prepares contributions to this newsletter:

- *Ralph MCGILL, FEEC*
- *Werner TOBER and Robert ROSENITSCH, TU Vienna*
- *Manfred WÖRGETTER, BIOENERGY 2020+*
- *Mitsuharu OGUMA and Shinichi GOTO, AIST*
- *Nuwong CHOLLACOOP, MTEC*
- *Wugao ZHANG, Shanghai Jiao Tong University*

Special thanks go to ERIA's Working Group on "Benchmarking of Biofuels in EAS Countries" for their news from Asia.

The AMFI Newsletter is available online at:

www.iea-amf.vtt.fi

CONTENTS

GENERAL INTEREST	3
GASEOUS FUELS	5
ALCOHOLS AND (BIO)GASOLINE	7
BIODIESEL ESTERS	7
SYNTHETIC AND RENEWABLE DIESEL	8
OTHER FUELS AND VEHICLES	8
MISCELLANEOUS	11
IEA & IEA/AMF News	13
PUBLICATIONS	14
EVENTS	15

DETAILED CONTENTS

GENERAL INTEREST

US: Higher Fuel Efficiency Standard

'Billion-Ton' Study Highlighting Growth in Bioenergy Resources

\$12 Million for Drop-In Biofuels

EU: Non-energy raw materials

From feedstocks to finance: upscaling sustainable biofuels

Thailand Energy Minister raises target for alternative energy usage

GASEOUS FUELS

Thailand Energy Minister plans to float NGV/LPG from subsidies

Price of natural gas for vehicle no more than 3.6 RMB per cubic meter in Taiyuan city, Shanxi province

Two National Standards on DME have been issued in China

ALCOHOLS AND (BIO)GASOLINE

US becomes largest ethanol exporter

BIODIESEL ESTERS

Biodiesel Industry Producing Record Volumes

As of July 1 Canada drives with renewable biodiesel

SYNTHETIC AND RENEWABLE DIESEL

Amyris to Supply São Paulo City Buses with Renewable Diesel from Sugarcane

OTHER FUELS AND VEHICLES

Driving "Back to the Future": Flex-Fuel Vehicle Awareness

DOE Promotes Electric Vehicles in 24 States

DOE Releases Annual Market Reports for Wind Energy, Advanced Vehicles, and Fuel Cell Technology

Europe's first solar-powered electric bus in public transport

The first new energy vehicles in FAW has been off the assembly line, and 9.8 billion RMB will be invested to build the industrial chain

MISCELLANEOUS

Sustainability schemes for biofuels

Advance Biofuels: DOE, USDA, and U.S. Navy Seek Input from Industry

NextGen Biofuels Fund Accepting Applications

U.S. and Australia to Cooperate to Develop Alternative Aviation Fuels

US Navy Completes Successful T-45 Biofuel Flight

EPA Seeks to Adopt Emission Standards for Large Commercial Aircraft

IEA & IEA/AMF News

ExCo42 in October in Istanbul, Turkey

Current Annexes to IEA AMF

Reports on Algal Biofuels

Conference Presentations

PUBLICATIONS

EVENTS

GENERAL INTEREST

US: Higher Fuel Efficiency Standard

13 major automakers have agreed to increase fuel economy for cars and light-duty trucks to 54.5 miles per gallon (mpg) by model year 2025. The companies—BMW, Chrysler, Ford, General Motors Corporation, Honda, Hyundai, Jaguar/Land Rover, Kia, Mazda, Mitsubishi, Nissan, Toyota, and Volvo—together account for more than 90% of all vehicles sold in the United States. The United Auto Workers and the State of California helped develop the agreement.

The next round of standards builds on the Obama administration's agreement for model year 2012-2016 vehicles. They will raise fuel efficiency to 35.5 mpg. Achieving the new goals will require innovative technologies and manufacturing. The standards for model years 2011 to 2025 will save \$1.7 trillion dollars in fuel costs.

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Transportation (DOT) have worked with auto manufacturers, the state of California, environmental groups, and other stakeholders to ensure these standards are achievable, are cost-effective, and preserve consumer choice. The program would increase the stringency of standards for passenger cars by an average of 5 % each year. After the proposed rules are published in the Federal Register, there will be an opportunity for public comment and public hearings.

Source: <http://www.whitehouse.gov/the-press-office/2011/07/29/president-obama-announces-historic-545-mpg-fuel-efficiency-standard>

Download: http://www.whitehouse.gov/sites/default/files/fuel_economy_report.pdf

'Billion-Ton' Study Highlighting Growth in Bioenergy Resources

The U.S. Department of Energy released on August 10, 2011, a report – *2011 U.S. Billion-Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry* – detailing U.S. biomass feedstock potential nationwide. The report examines the nation's capacity to produce a billion dry tons of biomass resources annually for energy uses without impacting other vital U.S. farm and forest products. The study provides industry, policymakers, and the agricultural community with county-level data and includes analyses of current U.S. feedstock capacity and the potential for growth in agricultural products for clean energy applications. The biomass resources identified could be used to produce clean, renewable biofuels, biopower, or bioproducts. With continued developments in biorefinery capacity, the feedstock resources identified could produce about 85 billion gallons of biofuels – enough to replace approximately 30 % of the nation's petroleum consumption.

The report supports the conclusion of the original 2005 *Billion-Ton Study* with added in-depth production and costs analyses and sustainability studies. The 2011 report uses more rigorous models to test the feasibility of increasing biomass production. The new report also conducts in-depth analyses of land-use changes and competition among food, feed, and energy crops. The findings demonstrate that increases in biomass-derived energy sources can be produced in a sustainable manner through the use of widely-accepted conservation practices. In some cases increased production may contribute to environmental improvements. For example, removing tree portions that are unfit for market in the forest industry can reduce forest fire risk, and planting energy crops on marginal lands can reduce soil erosion. The baseline scenario in the newly released report shows that biomass resources could be increased from a current 473 million dry tons annually to nearly 1.1 billion dry tons by 2030, under a conservative set of assumptions about future increases in crop yield.

To view the report and explore its data, which was analyzed at a local level – county-by-county – visit the *Bioenergy Knowledge Discovery Framework*.

Source: <http://energy.gov/articles/department-energy-releases-new-billion-ton-study-highlighting-opportunities-growth>

Download: <https://bioenergykdf.net/content/billiontonupdate>

\$12 Million for Drop-In Biofuels

DOE announced on August 31 that it would invest up to \$12 million to fund three small-scale drop-in biofuels projects. The projects seek to accelerate research and development that will lead the way toward affordable, clean alternatives to fossil fuels. Using innovative thermochemical processes, the projects will be turning biomass into biofuels and other products. These processes use heat and catalysts to convert biomass, in a controlled industrial environment, into liquid and gaseous intermediates that can then be chemically converted into fuels. Selected recipients include LanzaTech, Illinois, which will develop a cost-effective technology that converts biomass-derived ethanol into jet fuel using catalysts; the Research Triangle Institute, North Carolina, which will integrate a thermochemical process that produces a bio-crude intermediate with a hydroprocessing technology that upgrades the bio-crude into gasoline and diesel; and Virent Energy Systems, Wisconsin, which will convert biomass into oxygenated chemical intermediates using an innovative thermochemical technology and will then upgrade the intermediates to a hydrocarbon.

Source: <http://energy.gov/articles/department-energy-announces-12-million-investments-support-development-and-production-drop>

EU: Non-energy raw materials

Non-energy raw materials are vital inputs for the EU's economy, and are particularly crucial for the development of modern environmentally friendly technologies such as electric cars and photovoltaics.

However, maintaining fair and undistorted access to these materials for EU industry and citizens is increasingly difficult. Within the EU, exploration and extraction have to face increased competition for different land uses and a highly regulated environment. There are also important challenges to overcome in improving how Europe can increase the recovery of materials from waste.

On 2 February 2011 the European Commission adopted a new strategy document which sets out targeted measures to secure and improve access to raw materials for the EU. Based on the first Communication on the Raw Materials Initiative published in November 2008, this new strategy document further pursues and reinforces the 3 pillar-based approach to improving access to Raw Materials for Europe. These pillars are:

1. Fair and sustainable supply of raw materials from international markets
2. Fostering sustainable supply within the EU
3. Boosting resource efficiency and promote recycling

This new strategy also covers important considerations relating to the stability and transparency of commodity prices.

Source: http://ec.europa.eu/enterprise/policies/raw-materials/index_en.htm

From feedstocks to finance: upscaling sustainable biofuels

Deployment of innovative biofuels technologies, possible, but requires strong political commitment, say European biofuels stakeholders. The annual meeting of European biofuels stakeholders stressed that advanced biofuels technologies are now available and called for robust support to ensure their rapid and effective deployment in Europe.

At the Annual Stakeholder Plenary meeting of the European Biofuels Technology Platform (EBTP) on 14-15 September 2011, researchers, industry, academia, European Commission (EC) and environmental organisations gathered to focus on upscaling of the most promising technologies for advanced biofuels, and to discuss the best way forward for sustainability of feedstock production. Demonstration projects highlighted by the conference have overcome many of the key technical challenges in converting waste and residues to advanced biofuels such as cellulosic ethanol, biomass to-liquid (BtL), hydrogenated vegetable oil (HVO), biojet fuel and BioDME (dimethylether).

The ongoing EC commitment to Research and Demonstration on a wide range of advanced biofuel technologies, was welcomed by Lars Hansen, Chair of the EBTP Steering Committee, who

also stressed the need for policies that will support rapid deployment of sustainable biofuels. "Europe is leading the way in many key areas of sustainable biofuels technology, and several advanced biofuels are now ready for commercial deployment," said Lars Hansen. "However a supportive regulatory framework is vital for these technologies to become cost-competitive and make a rapid and effective contribution to EU 2020 targets for renewable energy use in transport and greenhouse gas emission reduction. This will enable the European biofuels industry to compete globally." The conference also highlighted the importance of feedstock availability, and the urgent need for clear and consistent guidance on sustainability issues across a diversity of biofuels production pathways.

Source: European Biofuels Technology Platform, 4th Stakeholder Plenary Meeting; Press release 14 September 2011; www.biofuelstp.eu.

Thailand Energy Minister raises target for alternative energy usage

On August 23, 2011, the new government, led by Thailand's first female Prime Minister Yingluck Shinawatra, has announced governmental policy to the House of Congress. Among other policies, Energy Minister Pichai Nariphaphan has raised a new target for alternative energy usage to 25% by 2022 from the previous target of only 20%. The new 25% target will exclude the usage of NGV (natural gas vehicles) from the previous 20% target.

On September 3, 2011, Energy Minister Pichai Nariphaphan has ordered the Department of Alternative Energy Development and Efficiency (DEDE) to expedite energy conservation campaigns with a view to reducing Thailand's dependence on energy imports.

The minister told the press that he has assigned the DEDE to publicize energy conservation among the public more because prices of all types of energy tend to increase further while Thailand still relies on energy imports which account for 90% of the total usage, worth one trillion baht a year.

Meanwhile, DEDE Director-General Krairit Nilkuha stated that the department is now revising the alternative energy development plan by raising the target of alternative energy usage to 25% by 2022 from the previous target of only 20%, and the plan is expected to be ready for implementation within this year.

The director-general however believed that the natural gas vehicles (NGV) will not be included in the revised plan because the government is now considering price restructuring for NGV and liquefied petroleum gas (LPG) vehicles. He noted that at present the DEDE has been successful in promoting alternative energy production, now accounting for more than 13% of the total energy usage.

In 2022, the Energy Ministry targets generating 500 megawatts of electricity from solar power. However, proposals with a combined capacity of 3000 MW for such power were submitted to the ministry. Hence, it is possible for the country to have solar power generation of more than 200 MW by 2022. Wind power has the potential to generate 1,200MW by 2022 if the government allows investors to enter potential areas for establishing wind turbines, he added.

More information:

<http://thainews.prd.go.th/en/news.php?id=255409030001>

<http://www.nationmultimedia.com/2011/09/03/business/Energy-ministry-sets-bigger-increases-for-alternat-30164400.html>

<http://www.nationmultimedia.com/2011/08/26/business/Biomass-solar-power-in-focus-30163703.html>

GASEOUS FUELS

Thailand Energy Minister plans to float NGV/LPG from subsidies

On August 26, 2011, the National Energy Policy Council (NEPC) chaired by Prime Minister Yingluck Shinawatra held a meeting to consider the Energy Ministry's Pichai Nariphaphan's plans. Among many others are the plans to float LPG (Liquid Propane Gas) in the industrial sector. The Energy Minister said it would not revise the policy of floating the LPG price on the step-up rate of Bt3 per kilogram every quarter, totalling four quarters.

He said the ministry would let the Central Administrative Court deal with the complaint by a group of ceramic businesses against the ministry's planned LPG price float. He said there was no reason to delay implementation of the plan after the industrial sector had long enjoyed subsidized LPG prices, already raised by Bt3 per kg for the first time on July 19, 2011

In addition, PTT (Thai oil and gas company) CEO Pailin Chuchottaworn urged the government to proceed with its plan to revamp the universal energy-pricing formula, which should lead to a cut in subsidies. Through the Oil Fund and excise taxes, the government subsidises several types of products, including diesel fuel, gasohol, NGV and LPG. As the market price of the two gas products is fixed, PTT had to bear the cost of the subsidies, amounting to Bt10 billion a year, while the Oil Fund pays out more than Bt20 billion a year for LPG subsidies.

Mr.Suthep Liumsirijarern, Director-General of the Energy Policy and Planning Office (EPPO) under the Ministry of Energy, has followed up by revising current energy price structure of various fuels such that the price hike plan will affect customers at the least, which is aimed to be implemented early next year.

More information:

<http://www.nationmultimedia.com/2011/08/26/business/Meeting-to-discuss-Oil-Fund-levy-suspension-30163731.html>

<http://www.nationmultimedia.com/2011/09/02/business/Float-all-prices-of-energy-products-experts-urge-g-30164313.html>

<http://mgr.manager.co.th/Home/ViewNews.aspx?NewsID=9540000116855> (in Thai)

Price of natural gas for vehicle no more than 3.6 RMB per cubic meter in Taiyuan city, Shanxi province

For the energy shortage in China, the news that six CBM (Coal Based Methane) gas stations in Taiyuan (capital city in Shanxi province) would increase their gas price was disseminated widely in August, which caused unease among the local NGV taxi drivers.

On 31th August 2011, the reporter learned from the Price Bureau of Shanxi Province that the gas price for vehicle was fixed, and gas stations are forbidden free to increase the price. The maximum retail price of natural gas for vehicles is no more than 3.60 RMB per cubic meter. (the price of both diesel and gasoline is no less than 7.00 RMB per litre in the same period)

In Taiyuan city, 7 gas stations have been built for vehicles since 2006, but because of the shortage of natural gas, most of the stations were closed. With the building of the pipeline, six of the gas stations have restored the capability to supply gas for city buses now.

It is just the same condition in China. With the building of several natural gas pipelines and LNG terminals, natural gas, as a fuel resource has been well guaranteed recently, and more and more provinces and cities use CNG and LNG as vehicle fuel. LNG vehicles have been promoted in large-scale in the provinces of Xinjiang, Inner Mongolia, Hainan, Fujian and Guizhou. In the meantime, many capital cities, such as Hangzhou, Qingdao, Dalian, Kunming, Wuhan, Binhai and Zhangjiagang have built more than one LNG fuel station for LNG city buses and heavy duty natural gas trucks.

Till now, the population of natural gas vehicles is more than 400,000 and the gas stations are more than 1400 in China, distributed in 30 provinces and many capital cities.

Gas vehicles and natural gas will meet the surge of development in China recently.

From: Shanxi City News, 2011-09-02

Two National Standards on DME have been issued in China

"Dimethyl Ether for City Gas" (GB 25035-2010) and "Dimethyl Ether for Vehicle Fuel" (GB/T 26605-2011) have been issued in China, the former implemented on July 1, 2011 and the latter will be implemented on November 1 2011. In addition, two projects for the energy industry standards, which were named "Mixture gas of LPG/DME" and "Tank for Mixture Gas of LPG/DME", were also approved by the National Energy Board of China.

The technical specifications of DME for Vehicles are: DME purity no less than 99.5 (%wt), methanol content no more than 0.3%, water content no more than 0.03%, and the sulphur content no more than 0.0005% (wt).

The technical specifications of DME for city gas are: DME purity no less than 99.0 (%wt), methanol content no more than 1.0%, water content no more than 0.5%.

The issue of two national standards will greatly promote the utilization of DME in domestic vehicles.

ALCOHOLS AND (BIO)GASOLINE

US becomes largest ethanol exporter

In Washington, the U.S. Energy Information Administration projected that the US would surpass Brazil as the world's largest exporter of ethanol, for the first half of 2011. The EIA said that shortages of ethanol and Brazil stemming from harvest conditions and global sugar prices, led to strong imports. The EIA also credited the elimination of a 20 percent import duty on ethanol, and reduced import tariffs on ethane, in the EU. The EIA and other observers have speculated that low-cost US corn ethanol would be exported to Brazil, while low-carbon Brazilian ethanol would be exported to California.

Source: <http://biofuelsdigest.com/bdigest/2011/08/29/us-becomes-largest-ethanol-exporter/>

BIODIESEL ESTERS

Biodiesel Industry Producing Record Volumes

U.S. biodiesel production reached a new monthly high of 81 million gallons in June, according to the latest EPA statistics, marking a third consecutive month of record volumes and continuing a remarkable turnaround in which biodiesel production in the first half of 2011 has already eclipsed production for all of 2010.

Since the introduction of the \$1-per-gallon biodiesel tax credit in 2005, U.S. biodiesel production climbed steadily until 2010, when Congress allowed the credit to lapse temporarily as the health care debate overshadowed other issues. Production immediately plummeted from a record of about 700 million gallons in 2008 to about 315 million gallons in 2010.

The industry has recovered quickly this year, after Congress reinstated the tax incentive in December 2010 and the EPA included biodiesel as an Advanced Biofuel in its new Renewable Fuels Program (RFS2), requiring minimum volumes of biodiesel use in U.S. fuels. In the first six months of this year, U.S. biodiesel production already has exceeded 375 million gallons.

Source: http://www.biodiesel.org/news/pressreleases/20110816_Volumesandjobs.htm

As of July 1 Canada drives with renewable biodiesel

The Canadian Renewable Fuels Association (CRFA) today praised the final release of the national 2% biodiesel mandate in Canada as good news for consumers, farmers and energy diversity in Canada.

"This will be a special Canada Day for the renewable fuels industry in Canada," said Gordon Quaiattini, CRFA president in reacting to the federal government's announcement of a July 1 start date for biodiesel blends in Canada. "Homegrown biodiesel is a cleaner alternative to conventional diesel. It will help stabilize fuel price by adding to our fuel supply, create new jobs, and benefit farmers and drivers alike."

Biodiesel contains no petroleum and can be made from a variety of renewable raw materials, or feedstocks, including pure seed oils, animal fats and recycled cooking oils. It performs comparably to petroleum diesel in terms of fuel economy, horsepower and torque. Biodiesel is safe to use in all diesel vehicles, and also can be used as heating oil and in a variety of other applications, including marine transportation, electrical generation, farming equipment and mining operations.

Independent studies have shown that Canadian-produced biodiesel generates between 85 to

99% less greenhouse gases, depending on feedstock, compared to conventional diesel fuel.

From an economic perspective, renewable fuels such as ethanol and biodiesel in Canada are a substantial source of economic and financial benefit to rural Canada. Construction of biofuels facilities has generated roughly \$3 billion in economic activity and ongoing operations represent a \$2 billion annual economic contribution.

For Canadian farmers, higher incomes that flow from the sale of surplus feedstock bring additional security and lessen reliance on income and safety net programs.

Source: http://www.greenfuels.org/uploads/media_centre/2011%20news%20releases/062911-biodiesel_regs_release.pdf

SYNTHETIC AND RENEWABLE DIESEL

Amyris to Supply São Paulo City Buses with Renewable Diesel from Sugarcane

Amyris Brasil S.A. will begin supplying an expected 160 city buses in São Paulo with Amyris renewable diesel derived from sugarcane. Starting in August, buses will run on a blend of 10 % renewable diesel, with petroleum diesel. The contract runs through the end of 2012. "Following the successful launch of our first industrial scale production facility and the positive results of the fleet testing in Brazil, we are thrilled to be a commercial supplier of renewable fuel for buses in Brazil's largest city. Over the next year we expect to achieve \$10-12 million in annual diesel sales," said John Melo, CEO of Amyris. "Brazil's growing demand for low-sulfur diesel creates a significant opportunity to highlight the performance of our renewable diesel while allowing the country to reduce diesel fuel imports, which comprised nearly 20 % of Brazil's diesel needs in 2010."

The city of São Paulo has more than 15,000 buses. Sugarcane-based diesel will help meet the city's target of reducing fossil fuel use in the public transit system. Under city law, São Paulo is working to reduce fossil diesel use by 10 % every year through 2018. "The testing we undertook last year with SPTrans, Mercedes-Benz, Petrobrás and Viação Santa Brígida confirmed that a 10% blend of our diesel in low-sulfur diesel can lower opacity (smoke) up to 40%," said Paulo Diniz, president of Amyris Brasil.

The leading commercial vehicle manufacturers in Brazil, led by Mercedes-Benz, have issued warranties for the use of 10 % Amyris renewable diesel blends in Brazil. Amyris has developed a hydrocarbon renewable diesel fuel derived from sugars that does not require engine or infrastructure modifications. The renewable diesel's proven cold weather performance, high cetane and comparable energy density to petroleum diesel have enabled the company to obtain the highest blending registration by the U.S. EPA-

Source: www.amyrisbiotech.com/en/newsroom/205-amyris-to-supply-sao-paulo-city-buses-with-renewable-diesel-from-sugarcane

OTHER FUELS AND VEHICLES

Driving "Back to the Future": Flex-Fuel Vehicle Awareness

The 1908 Model-T Ford was the first vehicle designed to run on ethanol—which Henry Ford termed "the fuel of the future." Today, about 8 million Flexible Fuel Vehicles (FFVs) on American roads are capable of running on either gasoline or gasoline blended with up to 85 percent ethanol (E85). By using E85, these flex fuel vehicles help to decrease our reliance on imported oil and reduce carbon pollution. The "Big Three" U.S. auto makers (Ford, General Motors, and Chrysler) recently announced that half of their entire 2012 vehicle line will be FFVs—including the hybrid-electric plug-in Chevrolet Volt.

Today's ethanol, essentially a non-drinkable grain alcohol, is made from corn or sugar cane. Researchers have also been developing processes to convert the cellulose in agricultural wastes like corn stalks, waste woods and other non-food biomass into ethanol. This biofuel, known as "cellulosic ethanol," will further reduce carbon pollution and is expected to enter the U.S. market in significant amounts in the near future.

The good news is that the difference between the engine performance of a FFV running on E85 and a conventional vehicle running on regular gasoline is not noticeable. And for information on how E85 reduces pollution, see *Energy Balance of Ethanol* and the U.S. Department of Energy Biomass Program's *Environmental Benefits page*. For information on how driving a FFV, as well as other driving habits, including vehicle maintenance and weather, affect fuel economy go to www.fueleconomy.gov, a useful website maintained jointly by the Environmental Protection Agency (EPA) and the Department of Energy.

According to EPA's rule determination, lower ethanol blends up to 15 percent ethanol (E15) can be used in all gasoline vehicles manufactured after 2001, E10 (10% ethanol, 90% gasoline) can be used in all gasoline vehicles manufactured after 1980, but only FFVs have been specially designed to run on E85. A surprising number of Americans are driving FFVs and don't realize it. To find out your vehicle is an FFV, check the owner's manual, look inside the driver's doorframe, or visit www.fueleconomy.gov. FFV drivers can easily calculate the money they save and the pounds of GHG emissions they eliminate when they fuel their FFV with E85. Just visit the FuelEconomy.gov website at www.fueleconomy.gov/feg/byfueltype.htm and select the appropriate FFV model on the search tool for alternative fuel vehicles.

Source: <http://energy.gov/articles/driving-back-future-flex-fuel-vehicle-awareness>

DOE Promotes Electric Vehicles in 24 States

DOE announced on September 8 that 16 projects will support activities in 24 states and the District of Columbia to accelerate the adoption of electric vehicles (EVs) in communities across the nation. Seven additional projects in seven states will help prepare college students for careers designing and building advanced vehicle technologies.

DOE's Clean Cities initiative, which builds partnerships to reduce petroleum use in transportation, will award \$8.5 million to communities that will boost community planning for plug-in EVs and charging infrastructure. Funding recipients range from communities with extensive EV planning experience to those that are eager to begin but lack the resources to do so. These one-year projects will help communities address their specific needs, which include updating permitting processes, revising codes, training municipal personnel, promoting public awareness, or developing incentives, and each project will create a plan that will be publicly available so that other stakeholders can learn best practices.

DOE's Graduate Automotive Technology Education (GATE) initiative will award \$6.4 million over the course of five years to support seven centers of excellence at American colleges, universities, and university-affiliated research institutions. The award recipients will focus on three critical automotive technology areas: hybrid propulsion, energy storage, and lightweight materials. By funding curriculum development and expansion as well as laboratory work, GATE allows higher education institutions to develop multidisciplinary training. As a result, GATE promotes the development of a skilled workforce of engineering professionals who will overcome technical barriers and help commercialize the next generation of advanced automotive technologies. For example, Purdue University in West Lafayette, Indiana, will comprehensively train, educate, and equip the next generation of research scientists and engineers to address technical challenges and respond to opportunities unique to medium- and heavy-duty hybrid vehicles. See the [list of GATE winners](#) and the [GATE website](#).

Source: <http://energy.gov/articles/energy-department-awards-will-promote-electric-vehicles-24-states-and-train-workforce>
http://www1.eere.energy.gov/vehiclesandfuels/deployment/education/fcvt_gate.html

DOE Releases Annual Market Reports for Wind Energy, Advanced Vehicles, and Fuel Cell Technology

The U.S. Department of Energy (DOE) released July 12, 2011 2010 market reports which detail the market of wind energy, advanced vehicles, and fuel cell technologies. These reports illustrate growth in deployment and manufacturing across all three technologies—improving the nation's global competitiveness in the clean energy economy and creating clean tech jobs for U.S. workers.

Earlier this year, DOE and its Oak Ridge National Laboratory released the 2010 Vehicle Technologies Market Report, which documents trends in fuel efficiency, component suppliers, and

the overall market for alternative fuel vehicles. In the past five years, car manufacturers have produced cars that are more energy efficient, incorporated innovative lightweight materials, built cleaner engines, and deployed new hybrid electric systems. The report also predicts that the number of hybrid electric vehicles (HEVs) and plug-in HEVs will rise significantly, particularly in battery manufacturing. Hybridization and efficiency improvements show the most promise for reducing heavy truck fuel consumption in the coming years.

Source: http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=568

Download: http://www1.eere.energy.gov/vehiclesandfuels/pdfs/2010_vt_market_rpt.pdf

Europe's first solar-powered electric bus in public transport

An Austrian consortium of five entities worked on the concept of a solar bus as part of a project supported in particular by the Federal Ministry of Transport, Innovation and Technology. Two sizes of buses have been made - a city bus and a 35-seat bus with 9 smaller squares.



These electric buses work with solar energy: in addition to solar panels embedded in the roof providing additional power, the batteries are recharged using solar panels.

The requirements were to drive 250 km per day for the city bus with no possibility of taking long breaks to recharge the batteries. Thus, the buses have been designed to allow a quick change of battery; while one is charging, the other drives the bus.

Due to the optimization of the final weight, the bus with battery and solar photovoltaic roof weighs no more than the equivalent diesel – about 4.6 tonnes – and travels at a speed of 80 km/h. Heating and cooling is based on an electric heat pump.

Since July, the city bus is being tested in the city of Perchtoldsdorf in Lower Austria, where it is integrated with public transport in the city; the smaller version of the bus will be tested starting in autumn in the city of Hornstein in Burgenland.

All stages of research and development were carried out by Austrian companies and organizations. This collaboration has mobilized teams of AIT (Austrian Institute of Technology), the manufacturer Kutschenits Busconstruction, University of Technology Graz, Austria Solarmobil and electricity supplier Ökostrom in addition to firms involved in the construction of buses. These partnerships are detailed on the website of Solarmobil.

Source: <http://gotpowered.com/2011/solar-bus-made-in-austria/>

The first new energy vehicles in FAW has been off the assembly line, and 9.8 billion RMB will be invested to build the industrial chain

At the end of August 2011, the first new energy vehicles in FAW (First Automobile Workshop) have been off the assembly line. They were a Besturn PHEV (Plug-in Hybrid Electric Vehicle) and a Besturn EV (pure Electric Vehicle) independently developed by FAW since 2009.

From the development plan, during the twelfth five-year- plan period, the FAW will invest 9.8 billion RMB to build a new energy vehicle industry chain. According to the commercialization layout, the new energy vehicles will be sold first to government and then to pilot customers, and finally to general customers. And the products will be covered from the A00 (engine displacement no more than 1.0L) to the C-Class (engine displacement 2.3~3.0L) models. According to FAW Technology Center Director Li Jun, the former model has three fuel-efficient characteristics, idle-start-stop, brake energy recovery, and downsizing. In the NEDC condition, fuel consumption per100 km is less than 3.2 liters. The vehicles can run in pure electric mode in urban areas to achieve zero emissions. In the long-distance journey, the vehicles enter into the hybrid mode. The charging time is 7 hours and after charging it can run as long as 70 km distance in pure electric mode.

For the EV, the permanent magnet synchronous motor (PMSM) with peak power of 90kw is used. Lithium-ion battery charging time is 7 hours and a single charge can travel 170 km.

News from the FAW indicates that the current annual production capacity for 10,000 new energy vehicles. Previously, the municipal government of Changchun and the FAW Group have reached an initial intent to purchase 1000 vehicles which use new energy. The progress of this intention will depend on the construction of supporting facilities in the capital city.

More information: <http://www.chinaev.org/DisplayView/Normal/News/Detail.aspx?id=11762>

MISCELLANEOUS

Sustainability schemes for biofuels

In order to receive government support or count towards mandatory national renewable energy targets, biofuels used in the EU, whether locally produced or imported, must comply with sustainability criteria. These criteria aim at preventing the conversion of areas of high biodiversity and high carbon stock for the production of raw materials for biofuels. We need to make sure that the entire biofuels' production and supply chain is sustainable. To this end, the sustainability of biofuels needs to be checked by Member States or through voluntary schemes which have been approved by the European Commission.

On 19 July 2011, the Commission has recognised seven voluntary schemes:

1. ISCC (International Sustainability and Carbon Certification)
2. Bonsucro EU
3. RTRS EU RED (Round Table on Responsible Soy EU RED)
4. RSB EU RED (Roundtable of Sustainable Biofuels EU RED)
5. 2BSvs (Biomass Biofuels voluntary scheme)
6. RBSA (Abengoa RED Bioenergy Sustainability Assurance)
7. Greenergy (Greenergy Brazilian Bioethanol verification programme)

This recognition applies directly in 27 EU Member States.

Source: European Commission, http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm

Advance Biofuels: DOE, USDA, and U.S. Navy Seek Input from Industry

DOE, the U.S. Department of Agriculture (USDA), and the U.S. Navy jointly announced the next step in the creation of a public-private partnership to develop drop-in advanced biofuels. The agencies issued a request for information (RFI) which seeks ideas from industry about how to leverage private capital markets to establish a commercially viable industry for biofuels. The three departments announced private sector investments of up to \$510 million during the next three years to produce advanced drop-in aviation and marine biofuels. The main objective is the construction advanced drop-in biofuel refineries at either commercial or pre-commercial scale. These facilities will produce drop-in advanced biofuels meeting military specifications, will be located in geographically diverse locations for ready market access. Responses to the RFI are due on September 30.

Source: <http://energy.gov/articles/usda-departments-energy-and-navy-seek-input-industry-advance-biofuels-military-and>

NextGen Biofuels Fund Accepting Applications

If you are an advanced biofuels company based in Canada that needs funds, then you might not have to look any further than the [NextGen Biofuels Fund](#). The fund was created by the Government of Canada to support development of advanced biofuels. Currently, Sustainable Development Technology Canada (SDTC) is issuing a Call for Applications.

"By helping to create biorefineries, the NextGen Biofuels Fund also aims to add value to renewable fuel production while diversifying the economy in rural and agricultural areas and

supporting market and technology transitions in the forestry sector,” said SDTC President and CEO Vicky Sharpe. “This will be crucial in helping Canada to transition to a bio-based, sustainable economy.”

The NextGen Biofuels Fund is able to support up to 40 percent of eligible project costs and the funds are repayable based on free cash flow over a period of 10 years after the project is completed.

To be eligible, a project must:

- Be a First-of-Kind facility that primarily produces a next-generation renewable fuel at large demonstration-scale.
- Be located in Canada.
- Use feedstocks that are or could be representative of Canadian biomass.
- Have demonstrated its technology at pre-commercial scale.

More information: http://domesticfuel.com/2011/08/29/nextgen-biofuels-fund-accepting-applications/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+DomesticFuel+%28Domestic+Fuel%29

U.S. and Australia to Cooperate to Develop Alternative Aviation Fuels

At the Asia Pacific Economic Cooperation meeting of Transportation and Energy Ministers in San Francisco on 13 Sept 2011, The U.S. Department of Transportation’s (DOT) Federal Aviation Administration (FAA) and Australia’s Department of Resources, Energy and Tourism signed a Memorandum of Understanding (MOU) to cooperate in research and development of clean, sustainable alternative aviation fuels. U.S. Secretary of Transportation Ray LaHood and Australian Ambassador to the United States Kim Beazley signed the agreement today.

“Air travel is global and we need international partners to develop these innovative new fuels,” Secretary LaHood said. “Our ultimate goal is to work with all of the Asia Pacific nations to achieve a sustainable, independent energy future for aviation, and this is an exciting first step.”

The MOU enables Australia and the United States to exchange information on policies, programs, projects, and research results, and to conduct joint studies in areas such investigation of new fuel sources and conducting environmental impacts.

Source/ more information: <http://www.caafi.org/news/CurrentNews.aspx>

US Navy Completes Successful T-45 Biofuel Flight

The U.S. Navy has successfully flown a T-45 training aircraft using biofuels at the Naval Air Station (NAS) in Patuxent River, Maryland. The flight was completed by the “Salty Dogs” of Air Test and Evaluation Squadron (VX) 23 flying on biofuel mixture of petroleum-based JP-5 jet fuel and plant-based camelina. The T-45 “Goshawk” is a tandem-seat aircraft used by the Navy and Marine Corps to train pilots on carrier and tactical mission operations.

“This successful test flight brings us a step closer to meeting the Navy’s energy security goals,” said Vice Adm. David Architzel, commander, Naval Air Systems Command. “My congratulations to the Navy fuels team here at NAVAIR for playing an instrumental role in proving the viability of biofuels to power naval aircraft.”

The T-45 is the fifth Navy aircraft to successfully test the biofuel blend. Previous aircraft tested include the F/18 E/F, MH-60S, F/A-18 D, and most recently, the MV-22. The move to biofuels is being driven by Navy Secretary Ray Mabus’ goal to cut the Navy’s oil usage in half by 2025.

“This test of the T-45 with a 50/50 blend of biofuel represents another significant milestone in the long list of detailed flight test and demonstrations of the F-18 Super Hornet, the MH-60S, and the V-22,” said Rear Adm. Phil Cullom, Director of the Chief of Naval Operations Energy and Environmental Readiness Division. “Our commitment to the aggressive test schedule for drop-in replacement fuels for JP-5 and F-76 keep us on pace for the 2012 demonstration and 2016 deployment of the Great Green Fleet.”

Source: http://domesticfuel.com/2011/08/29/us-navy-completes-successful-t-45-biofuel-flight/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+DomesticFuel+%28Domestic+Fuel%29

EPA Seeks to Adopt Emission Standards for Large Commercial Aircraft

The U.S. Environmental Protection Agency (EPA) is proposing to adopt new air pollution standards for engines used primarily in large commercial aircraft, including 737s, 747s, and 767s. The proposal would reduce ground-level nitrogen oxide emissions by an estimated 100,000 tons nationwide by 2030. Exposure to nitrogen oxide emissions can cause and aggravate lung diseases and increase susceptibility to respiratory infection.

The standards were previously agreed to by the United Nation's International Civil Aviation Organization (ICAO). Due to the global nature of air travel, EPA works with international agencies to ensure significant and cost effective emissions reductions. If adopted in the United States, the standards would be phased in over the next two years, applying to all new engines in 2013.

Comments will be accepted for 60 days after the date that the proposal is published in the Federal Register.

More information: <http://www.epa.gov/otaq/aviation.htm>

IEA & IEA/AMF News

ExCo42 in October in Istanbul, Turkey

The next meeting of the AMF Executive Committee will take place 25-27 October 2011 in Istanbul, Turkey.

Current Annexes to IEA AMF

- Annex XXVIII (28): Information Service & AMF Website (AMFI) and Fuel Info
- Annex XXXIV-2 (34-2): Algae as Feedstock for Biofuels
- Annex XXXV-2 (35-2): Particulate Measurements: Ethanol and Butanol in DISI Engine
- Annex XXXVII (37): Fuel and Technology Alternatives for Buses
- Annex XXXVIII (38): Environmental Impact of Biodiesel Vehicles
- Annex XXXIX-2 (39-2): Emission Performance of HD Methane Engines Phase 2
- Annex XL (40): Life Cycle Analysis of Transportation Fuel Pathways
- Annex XLI (41): Alternative Fuels for Marine Applications
- Annex XLII: (42) Toxicity of Exhaust Gases and Particles from IC-Engines
- Annex XLIII (43): Performance Evaluation of Passenger Car, Fuel, and Powerplant Options

Reports on Algal Biofuels

The AMF Annex 34 report on Algal Biofuels has been published among the group of participants to this Annex. Additionally, a joint Executive Summary with IEA Bioenergy Task 39 has been elaborated and is available on both the IEA AMF and the IEA Bioenergy Task 39 webpages.

Conference Presentations

Projects and findings of the Advanced Motor Fuels Agreement will be presented at ISAF XIX in Verona, Italy, 10-14 October 2011, and at ANGVA 2011 in Beijing, China, 18-20 October 2011.

PUBLICATIONS

European Union - Emission Inventory 1990–2009

This document is the European Union emission inventory report under the United Nations Economic Commission for Europe (UNECE) Convention on Long-range Transboundary Air Pollution (LRTAP). It includes information on the formal institutional arrangements that underpin the European Union's emission inventory, emission trends for the EU 27 and Member States, and the contribution of important individual emission sources to total emissions, sector group emission trends for key pollutants, information on recalculations and future planned improvements.

Source: European Environment Agency (EEA) - Publications (<http://www.eea.europa.eu/publications/eu-emission-inventory-report-1990-2009>)

Download: http://www.eea.europa.eu/publications/eu-emission-inventory-report-1990-2009/at_download/file

Technology Roadmaps: Electric and plug-in hybrid electric vehicles

The Electric and Plug-in Hybrid Vehicle (EV/PHEV) Roadmap for the first time identifies a detailed scenario for the evolution of these types of vehicles and their market penetration, from annual production of a few thousand to over 100 million vehicles by 2050.

It finds that the next decade is a key "make or break" period for EVs and PHEVs. The roadmap outlines additional recommendations that must be considered in order to successfully meet the technology milestones and strategic goals.

Source: International Energy Agency (IEA) Publications & Papers
http://www.iea.org/publications/free_new_Desc.asp?PUBS_ID=2156

Download: http://www.iea.org/papers/2011/EV_PHEV_Roadmap.pdf

ACEA: Statistics - COMMERCIAL VEHICLES: registrations up in first half-of 2011

In June demand for new commercial vehicles were up 1.5%, compared to the same month a year ago. In total, 165,767 new vehicles were recorded in the EU. While the UK (+12.8%) and Germany (+8.7%) posted growth, Spain (-12.7%) and France (-6.8%) performed less well.

In the first semester of 2011, registrations of new commercial vehicles amounted to 1,001,579 units, or 13.5% more than in the first half-year of 2010. Spain was the only major market to decline (-8.4%) while France (+8.5%), the UK (+23.8%) and Germany (+24.5%) all saw their markets expanded.

Source: ACEA Association des Constructeurs Européens d'Automobiles

http://www.acea.be/index.php/news/news_detail/commercial_vehicles_registrations_up_13.5_in_first_half-year

Download: http://www.acea.be/images/uploads/files/20110726_PRCV-1106-FINAL2.pdf

ACEA: Statistics - PASSENGER CARS: registrations down in first half-of 2011

In June, all important markets faced a downturn, leading to an overall 8.1% fall across the EU. Contractions ranged from -0.3% in Germany to -1.7% in Italy, -6.2% in the UK, -12.6% in France and -31.4% in Spain.

In the first half-year, the situation in the major markets varied, resulting in a 2.1% decline of EU registrations. While Germany (+10.5%) performed better than in the same period a year ago, the UK (-7.1%), Italy (-13.1%) and Spain (-26.8%) saw the number of new car registrations decrease. Registrations in France (+1.0%) were almost level compared to last year.

Source: ACEA Association des Constructeurs Européens d'Automobiles

http://www.acea.be/news/news_detail/passenger_cars_registrations_down_2.1_in_first_semester_2011

Download: http://www.acea.be/images/uploads/files/20110715_PRPC-FINAL-1106.pdf

EU: National biofuels reports

Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport (Biofuels Directive) sets indicative targets for Member States for the use of biofuels or other renewable fuels in the transport sector. Thus, 2% (calculated on the basis of energy content) of all the fuels used in transport should be replaced by biofuels and other renewable fuels after 2005, rising to 5.75% in 2010.

Member States should ensure that a minimum proportion of biofuels and other renewable fuels is placed on their markets, and, to that effect, must set national indicative targets. The following information must be reported to the Commission each year:

the measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes;

the national resources allocated to the production of biomass for energy uses other than transport;

the total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market for the preceding year. Where appropriate, Member States must report on any exceptional conditions in the supply of crude oil or oil products that have affected the marketing of biofuels and other renewable fuels.

Source: European Commission http://ec.europa.eu/energy/renewables/biofuels/ms_reports_dir_2003_30_en.htm

Download: http://ec.europa.eu/energy/renewables/biofuels/doc/member_states_reports_directive_2003_30_ec_2011.zip

EVENTS

World Biofuels Markets Brazil, 28-29 September 2011, São Paulo, Brazil

With a focus on technological advances, innovation, finance and investment and the culture of partnerships in first and second generation biofuels – this biofuels event will cater for both local and international key industry players. The event will explore the opportunities and challenges that advanced biofuels represent for the country in addition to first generation biofuels and the feedstocks which will open up a new window of opportunity for sustainable energy production.

This Brazilian Congress will bring together the entire biofuels value chain from Brazil and also the EU and US, to include producers, refiners, technology suppliers, financiers, traders, oil majors and government.

Information: <http://www.worldbiofuelsmarkets.com/brazil>

5th Biodiesel International Conference, 6-7 October 2011, Berlin, Germany

The focus of the 5th International Conference on biodiesel, organized by Association Quality Management Biodiesel reg. Ass. (AGQM), will be on current aspects of quality assurance, research results of the application in engines (B100 and blends), in addition to current developments and trends in the international markets for biodiesel. In particular, participants will be informed in detail on the future focus of the application of biodiesel as a blending component in heating oil. With this commitment, AGQM underlines the objective of developing the heating oil market as a new high-volume sales market for biodiesel in the future. This was an urgent necessity considering an overcapacity of the order of approximately 10 million tonnes throughout the European Union.

Information: <http://www.agqm-biodiesel.de/index.php?msg=339>

ISAF (International Symposium on Alcohol Fuels) XIX, 10-14 October, Verona

The main theme is "Innovation for Local and Global Sustainability of Alcohol Fuels". ISAF XIX is colocated with the 2nd Lignocellulosic Bioethanol Conference, a major event on 2nd generation bioethanol technologies organized by the European Commission and Brazil.

Information: <http://www.isaf2011.it>

20th Aachen Colloquium "Automobile and Engine Technology" 10-12 October 2011, Aachen

The Aachen Colloquium "Automobile and Engine Technology" has become the largest automotive and engine technology congress in Europe. The congress provides a wide range of technical presentations addressing current challenges of the vehicle and powertrain industry. The technical exhibition is the second essential part of the Aachen Colloquium. On an exhibition area exhibitors presented their products and services.

Information: <http://www.aachener-kolloquium.de/>

15th International VDI Congress and Exhibition, "Electronic Systems for Motor Vehicles", 12-13 October 2011, Baden-Baden, Germany

Electric Systems – Electronic Systems – Electromobility

The international technical congress "Electronic Systems for Motor Vehicles" is an event, organized for the industry to address technological issues of electric and electronic systems as well as the integration of mechanical with electronic systems. It has developed into the crucial communication and discussion platform for the industry's decision-takers and engineering specialists representing vehicle manufacturers, suppliers and service providers.

The field of electro mobility is highly dynamic; therefore this subject is included as a focal topic of the 2011 congress. The subject of "China as a challenge", both as a market-place and a future competitor, will be one of the new focal topics.

Information: http://www.vdi-wissensforum.de/index.php?id=345&no_cache=1

ANGVA 2011 (4th Biennial Asia Pacific Natural Gas Vehicles Association International Conference & Exhibition), 18-20 October, Beijing

Speakers from more than 20 countries in the Asia-Pacific region, the European and the American region will deliver speeches, covering almost all parts of the NGV industry chain, including natural gas supply, the construction of natural gas refueling stations, the R&D and production of vehicles and parts, alternative fuels, safety standards, as well as policies and regulations.

Information: <http://angva2011.com>

Biogas as vehicle fuel, 19-20 October 2011, Rzeszow, Poland

The conference is organized within the European Project "Baltic Biogas Bus", and aims to summarize European achievements to date in the use of biogas as transport fuel.

- Environmental benefits from use of biofuels
- Biogas as transport fuel in EU projects
- The Baltic Biogas Bus current state of the project
- Biogas upgrading and production technologies
- Practical examples of use biogas in transport
- Factors influencing use of biogas in transport

The conference will be translated simultaneously in English and Polish. Further details are available online.

Information: http://www.its.waw.pl/link,organization_information,1.html

ECO-MOBILITY 2011, 15-16 November 2011, Vienna

Strategies, Roadmaps and R&D Programs and Projects of Industry, Research and Public Authorities for the Market Introduction of Alternative Propulsion Systems and Fuels.

On 15th and 16th November 2011 the A3PS organizes its 6th international conference in Vienna. Representatives from industry, policy and research institutions will present and discuss their latest results concerning the introduction of alternative propulsion systems.

Information: <http://www.a3ps.at/site/de/eco-mobility-2011>

Biofuels International Expo and Conference, 16-17 November 2011, Antwerp, Belgium

Hosted annually, Biofuels International Expo & Conference attracts biofuel producers and plant owners. Organized by the leading publication, Biofuels International, the event is now celebrating its fourth year in Europe.

After the global 2010 recession the biofuels market in Europe is looking forward to a prosperous 2011 and sustained growth. With the European biofuel market gaining support from the government and the public, the event will offer a larger exhibition with a diverse offering of exhibitors and a topical conference programme. Conference topics include:

- regional reports
- policies and regulations
- biofuel use
- economics
- biofuel challenges
- biofuel development and new products
- biochemical/biorefineries
- biofuel trading

Information: <http://www.biofuelsinternationalexpo.com/>

2011 FISITA World Automotive Summit, 17-18 November, Mainz

The FISITA World Automotive Summit is a unique annual meeting of automotive leaders. It brings the world's top technical executives together with scientists, public policy-makers and influential NGOs to work on an issue of central importance to the automobile and society. For 2011 the chosen topic is the future of personal mobility.

Information: <http://www.fisita-summit.com/>

Clean Fuels Conclave 2011, 23-24 November 2011, Mumbai, India

This event covers a broad spectrum of conversion technologies that are at various stages of commercialization, including fermentation, catalytic conversion, anaerobic digestion, catalytic fast pyrolysis, hydro-pyrolysis, hydrothermal liquefaction, syngas-to-fuels, plasma pyrolysis, catalytic depolymerization, algae growing systems, BTL, WTL, solid catalyst based biodiesels, etc..

Information: <http://growdieseevent.com/default.aspx>

2nd Annual Global Biofuels Summit, 25-26 January 2012, Barcelona, Spain

- Biofuels worldwide - global outlook
- EU biofuels policy
- Production of sustainable biomass. Implementation of the RED in Germany and required information in respect of Art. 18 Directive 2009/28/EC
- Panel discussion: Indirect Land Use Change (ILUC)– decision of European Commission
- Insight from Oil & Gas Companies: Availability of biofuels at competitive prices
- Insight from Automotive Industry: Efficiency vs. Sustainability. What is going to be the fuel of the future?
- Renewable diesel
- International biofuels trade
- Land use conflicts – the increasing competition for biomass

Information: <http://energy.flemingeurope.com/biofuels-summit/>

5th Conference Simulation and Testing for Automotive Electronics, 10–11 May 2012, Berlin

From the concept phase through to calibrating control units, developing vehicles is nowadays inconceivable without simulation. This makes simulation virtually indispensable in developing hardware and software for complex and interconnected automotive.

The 5th conference is focusing on "Electrifying the Vehicle", concerning on the following topics:

- Modeling of powertrains (conventional, hybrid, electric), chassis / suspension, overall vehicle
- Data-based modeling (identification) and model parameterization
- Using simulation in computing vehicle performance and consumption
- Using simulation in automated control unit calibration
- Optimization techniques and grid computing
- Algorithm and software testing using HiL, MiL and SiL simulation
- New simulation tools and methods
- Test engineering: process, methods and automation
- Test management: concepts, experience and interfaces
- Automated test case generation
- Model-based methods in the testing process: analyzing interconnected control unit

Information: http://www.iav.com/en/index.php?we_objectID=17872

IEA AMF Delegates

Australia

Department of the Environment
Sharon Rees

Austria

Austrian Federal Ministry for Transport
Andreas Dorda

Canada

Natural Resources Canada
Jean-Francois Gagné

People's Republic of China

CATARC, Maodong Fang

Denmark

DTU, Jesper Schramm

Finland

VTT, Nils-Olof Nylund

France

ADEME, Patrick Coroller

Germany

FNR, Birger Kerckow

Italy

Eni SpA, Pietro Scorletti

Japan

AIST, Shinichi Goto
LEVO, Nobuichi Ueda

Spain

IDAE, Francisco José Domínguez Pérez

Sweden

Swedish Road Administration
Olle Hådell

Switzerland

SFOE, Sandra Hermlé

Thailand

NSTDA, Coovattanachai Naksitte

The United States

DOE, Kevin Stork

Editor: BIOENERGY 2020+, Gewerbepark Haag 3, A-3250 Wieselburg-Land dina.bacovsky@bioenergy2020.eu Dina Bacovsky