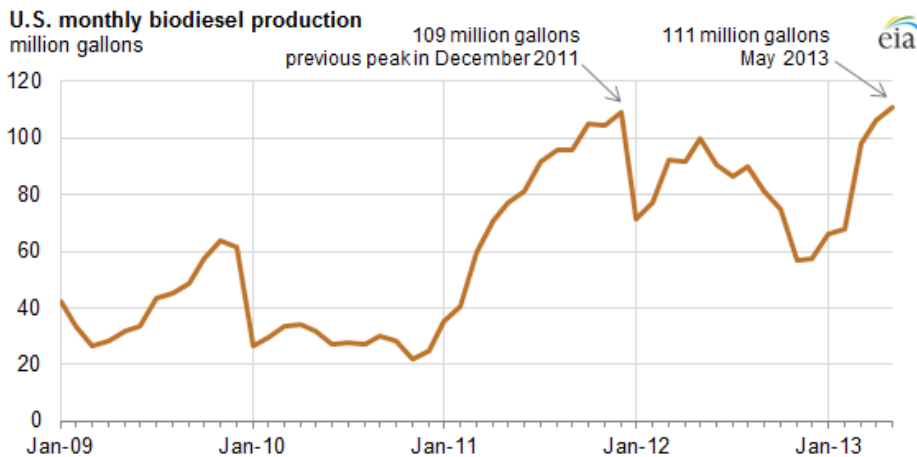


AMFI Newsletter



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.

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The AMFI Newsletter is available online at: www.iea-amf.org

U.S. biodiesel production reached a record level in May 2013
[more](#)

CONTENTS

GENERAL INTEREST	3
FEEDSTOCK ISSUES	3
GASEOUS FUELS	4
ALCOHOLS AND (BIO)GASOLINE	5
BIODIESEL ESTERS	6
SYNTHETIC AND RENEWABLE DIESEL / JET	7
OTHER FUELS AND VEHICLES	8
MISCELLANEOUS	8
IEA & IEA-AMF News	10
PUBLICATIONS	11
EVENTS	14

DETAILED CONTENTS

GENERAL INTEREST

USA EPA cutting Alternative Fuels

FEEDSTOCK ISSUES

Increasing Raw Material Diversity in Germany's Biodiesel

GASEOUS FUELS

Natural Gas Trucks

ALCOHOLS AND (BIO)GASOLINE

Best-in-class Ethanol Combustion Efficiency

Cellulosic Ethanol at Sugar Cane Plants

Haldor Topsøe and Project Partners reach Milestone

BIODIESEL ESTERS

Biodiesel on Pace for Record Year in US

Fifty percent more Biodiesel in Malaysia

Sofiprotéol is Reorganizing its Biodiesel Activities

SYNTHETIC AND RENEWABLE DIESEL / JET

Making valerolactone (GVL) cheaper – an option as alternative fuel?

OTHER FUELS AND VEHICLES

John Deere Introduces Flex Fuel Mower

MISCELLANEOUS

Alberta Looks to Become Canada's Biofuel Leader

Increasing Diesel Car Registration in the US

Obama Takes Major Action on Climate Change

UK: £25 million for Advanced Biofuel Demonstration Projects

IEA & IEA-AMF News

AMF IA

AMF Executive Committee

AMF Annexes / Projects

PUBLICATIONS

EVENTS

GENERAL INTEREST

USA EPA cutting Alternative Fuels

The Environmental Protection Agency (EPA) is establishing the volume requirements and associated percentage standards that apply under the renewable fuels standard RFS2 program in calendar year 2013 for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel. The standards ensure that transportation fuel sold in the United State contains a minimum volume of renewable fuel as required by the Energy Independence and Security Act of 2007.

EPA bowed to the limits of the U.S. market's ability to work renewable fuels into the nation's energy mix, disclosing it will set 2014 production goals for alternative motor fuels that are below the target set by law.

The agency said it has no plans to abandon the mandate to increase the use of biofuels as some oil industry critics have suggested, but its plan for reduced targets next year was a tacit acknowledgment the market is not ready yet to handle the production volumes for ethanol and other alternative fuels envisioned by Congress.

The decision was mixed news for both oil industry groups that oppose the renewable fuels standard, known as the RFS, and biofuel backers, who have argued the more ambitious targets could be met through higher blends of ethanol in gasoline that EPA has approved but which gas stations have yet to adopt.

Fact Sheet: <http://www.epa.gov/otaq/fuels/renewablefuels/documents/420f13042.pdf>

Sources:

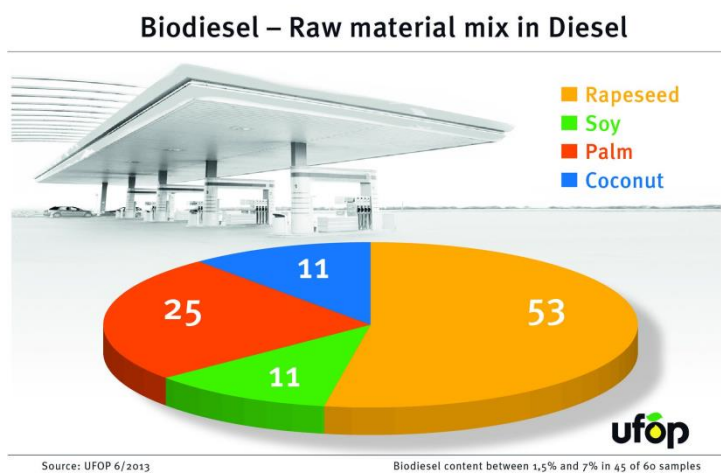
<http://www.epa.gov/otaq/fuels/renewablefuels/regulations.htm#2013-8-6>

<http://www.washingtontimes.com/news/2013/aug/6/epa-cutting-alternative-fuels-goal-in-bow-to-marke/>

FEEDSTOCK ISSUES

Increasing Raw Material Diversity in Germany's Biodiesel

With 53 percent raw material content, rapeseed oil remains the most important raw material source for the production of biodiesel in Germany, followed by palm oil with 25 percent, coconut and soya oil with 11 percent respectively. This is the result of the study presented by the Union zur Förderung von Oel- und Proteinpflanzen e.V. (UFOP). 60 filling stations of mineral oil companies throughout Germany – weighted according to market shares – were sampled and the biodiesel component in the diesel fuel as well as its raw material composition were determined on behalf of the UFOP.



In the years 2010 and 2011, German agriculture benefitted from the fact that practically only certified rapeseed from domestic production was available after the immediate national implementation of the Renewable

Energies Directive. The raw material mix now determined reveals that the certification systems approved by the EU Commission have now also been introduced in countries outside the EU such as Argentina, Brazil as well as Indonesia and Malaysia. In other words, the supply of sustainably certified raw materials for biofuel production has meanwhile become globalised, according to UFOP.

Source: <http://www.ufop.de/english/news/filling-station-trial-for-standard-diesel-fuels-throughout-germany/>

GASEOUS FUELS

Natural Gas Trucks



Natural Gas-powered Kenworth truck

Natural gas passenger cars have never really taken off in the U.S. like some thought they might. While the fuel is hugely popular in countries like Brazil, gasoline has always reigned supreme in North America. Or diesel, if you're a long-haul trucker--though that could be about to change.

Natural gas is already becoming a major power source across the U.S, but the trucking industry is quickly turning to its two major benefits--cleaner running and lower pricing. The former is particularly important environmentally, given the billions of miles truckers drive every year delivering produce to each corner of the country. But as an industry that spends vast amounts on fuel, the potential for something cheaper is highly attractive.

The New York Times reports that natural gas fuel prices are as much as \$1.50 per gallon equivalent cheaper than diesel. With eight million medium and heavy-duty trucks on U.S. roads, the savings for the industry would be enormous.

If that industry can reduce its costs by \$1.50 per gallon equivalent, some of those savings can be passed on to the consumer--the whole supply chain becomes more affordable, so the cost of products need not rise as quickly.

The industry consumes three million barrels of oil per day, the equivalent of three quarters of the oil imported into the U.S. Roughly two-thirds of the diesel used as transportation fuel is currently used by three million 18-wheelers.

Source: http://www.greencarreports.com/news/1083725_natural-gas-as-vehicle-fuel-why-trucks-make-more-sense-than-cars

ALCOHOLS AND (BIO)GASOLINE

Best-in-class Ethanol Combustion Efficiency

In his presentation at the Ethanol Summit 2013 in Sao Paulo, Brazil, Ricardo's Thomas Apostolos said that the company's Extreme Boosted Direct Injection (EBDI) engine has the potential to deliver best-in-class efficiency for ethanol combustion. He outlined a technology approach wherein an EBDI engine achieved diesel-like fuel efficiency from a spark ignited engine. Torque performance characteristics were also similar to that of a diesel across a broad range of engine speeds, when running on E85.

Apostolos presented these Ricardo technologies during the plenary session "Scenarios 2020: The Evolution of Flex Fuel Technology" at this year's Ethanol Summit. The Summit is a global gathering held every two years since 2007 and dedicated to in-depth discussions about renewable energies, with special emphasis on sugarcane-based energies and products. Apostolos told the audience, "Ethanol fuel properties make it possible to match diesel efficiency. Ethanol and CNG together, in a dual-fuel direct injection application, offer a huge opportunity for the large and heavy duty engine industry." In addition, he noted Ricardo's long history and understanding of ethanol, with research in alcohol blended fuel dating back to the 1920s.

Source: <http://www.ricardo.com/en-GB/News--Media/Press-releases/News-releases1/2013/Ricardo-presents-best-in-class-ethanol-combustion-efficiency-at-Brazil-summit/>

Cellulosic Ethanol at Sugar Cane Plants

Biofuel startup Edeniq has begun construction of a demonstration-scale cellulosic ethanol operation at a sugar cane plant owned by Usina Vale in Brazil. Edeniq's process will make fuel from bagasse. The ethanol will be added to the plant's existing production. The amount of money needed for this "bolt-on" is lower than building a stand-alone facility. In addition to technical and engineering problems, many advanced biofuels companies have struggled to fund large-scale operations since financiers are wary of new technology.

"The whole goal all long has been to plug in and utilize the billions of dollars already put into the industry in the U.S. and Brazil", Edeniq CEO Brian Thome said. He wouldn't say how much Edeniq's fuel costs but he said the capital and operating costs are within the same range as corn or sugar ethanol plant. The technology also allows ethanol plant operators to make use of bagasse or corn stover. At Usina Vale's plant, the bagasse is currently burned to help run the machines.

Edeniq has developed proprietary machines for crushing feedstock, which can be bagasse or corn stover, the plant material from corn stalks. After pretreatment, biomass is treated with enzymes to convert it into sugar water, which is then fermented into ethanol. This plant, expected to be open in the middle of next year, will process 20 dry tons a day of bagasse, a step up from a two-ton-a-day pilot plant in California which was funded mostly by the DOE, Thome says. The company has plans for larger plants either in the U.S. or Brazil. India, another sugar cane producing country, has potential for bagasse ethanol production.

This bolt-on approach is being tried by other biofuel companies as a way to leverage existing corn or sugar cane facilities. Poet next year will open a corn cob-to-ethanol plant, called Project Liberty, next to one of its existing corn ethanol facility in Iowa.

Source: www.technologyreview.com/view/507621/making-cellulosic-ethanol-at-sugar-cane-plants/

Haldor Topsøe and Project Partners reach Milestone

Haldor Topsøe A/S and its project partners Andritz Carbona, Gas Technology Institute, Phillips 66 Company and UPM-Kymmene have successfully completed the first production of gasoline from woody biomass in an integrated 20 bbl/day demonstration plant located near Chicago.

The integrated pilot plant consists of Andritz Carbona gasification and Andritz Carbona/Haldor Topsøe catalytic reforming that produces clean syngas, GTI/Uhde's Morphysorb® process to capture acid gases and Haldor Topsøe's TIGAS process to convert syngas to gasoline. Woody biomass is supplied by UPM-Kymmene and Phillips 66 Company will conduct single engine emission tests and moderate fleet testing of the renewable drop-in gasoline.

The project has been supported by the U.S. Department of Energy (DOE), Golden Field Office, under its Integrated Biorefinery Platform program to demonstrate a new technology for thermochemical conversion of woody biomass into gasoline. The project team has worked under a cost sharing contract with DOE since 2010 (Award Number DE-EE0002874).

The demonstration plant started operations in early 2013 and will continue with additional demonstration runs during the fall of 2013 and the spring of 2014. The primary objective of the additional demonstration runs is to validate performance and economics for commercialization of the technology.

Source: <http://www.topsoe.com/Media/News/2013/240613.aspx>

BIODIESEL ESTERS

Biodiesel on Pace for Record Year in US

Boosted by strong federal policy aimed at diversifying the transportation fuels market, the U.S. biodiesel industry reached a new production record for the first half of the year and is on pace for its best year ever, according to new EPA figures.

Biodiesel refiners across the country have produced more than 636 million gallons through the end of June, the EPA reported. That puts the industry on pace to break the previous annual biodiesel production record of just under 1.1 billion gallons and to significantly exceed this year's volume requirement under the Renewable Fuel Standard (RFS).

Biodiesel, made from a diverse mix of resources including soybean oil, recycled cooking oil and animal fats, is the only EPA-designated Advanced Biofuel with commercial-scale production nationwide, and the first to reach 1 billion gallons of annual production. In 2011, production reached nearly 1.1 billion gallons. It remained flat at that level in 2012 after Congress allowed the \$1-per-gallon biodiesel tax incentive to expire.

Source: <http://www.biodiesel.org/news/biodiesel-news/news-display/2013/07/25/biodiesel-on-pace-for-record-year>

Fifty percent more Biodiesel in Malaysia

MALAYSIA is expected to increase biodiesel production by 50 % to 375,000 tons this year due to price differential between crude oil and palm oil. Plantation Industries and Commodities Minister Datuk Seri Douglas Uggah Embas said, palm oil price is averaging at around RM 2,300 per tonne while petroleum is being sold at around US\$108 (RM343) per barrel.

In a move to promote the use of biodiesel, the government started to subsidize the price differential between diesel and biodiesel two years ago through the Automatic Pricing Mechanism. It was reported that this biofuel subsidy fluctuated at between 0.05 and 0.07 RM per liter. The B5

rollout in Johor involves 415 service stations, 37,270 tons of palm oil biodiesel will be used in a year. This will contribute to a saving of 43.14 million liters of fossil diesel per year.

The B5 program was launched in the central region from June 2011, covering Malacca, Negri Sembilan, Putrajaya, Selangor and Kuala Lumpur. With the addition of Johor, all six will need about 150,000 tons of biodiesel per year to implement the program. This is about 30 % of the 500,000 t/a of biodiesel required for nationwide implementation. On top of the B5 subsidies, the government has also allocated RM42 million to fund in-line blending facilities at six petroleum depots owned by five oil companies, namely Petronas, Shell, Petron, Chevron and Boustead Petroleum Marketing.

Source: <http://www.kppk.gov.my/index.php/en/news-cutting/1452-plan-to-produce-50pc-more-biodiesel.html>

Sofiprotéol is Reorganizing its Biodiesel Activities

Sofiprotéol presented its plans for reorganization of its biodiesel production activities in France, designed to improve competitiveness while preserving jobs. These plans provide for the closure of two esterification units with a total capacity of 380,000 tons and one crushing unit, and the merger of two subsidiaries, Diester Industrie and Saipol. The unfavorable context of the biofuels market (drop in the incorporation rate, changes to the European Energy Directive, massive imports) has led the Group to reorganize the activities. Investments were previously based on the European target of a 10% incorporation rate for renewable energy in fuel used by transport. However, maximum limit for biodiesel esters of 7% has been decided at a European level, and ceiling of 5% for 1st generation biofuels are currently under discussion. An improvement in competitiveness is essential. The reorganization plan consists in redeploying resources in order to recover investment capacities for new-generation biofuels and renewable chemistry.

Source: <http://www.sofiproteol.com/en/media-center/communiqués-de-presse/details-du-communique/article/sofiproteol-reorganise-ses-activites-dans-le-biodiesel-en-france-pour-ameliorer-sa-competitivit/35/>

SYNTHETIC AND RENEWABLE DIESEL / JET

Making valerolactone (GVL) cheaper – an option as alternative fuel?

MIT chemical engineers have devised a cheaper way to synthesize a key biofuel component, which could make its industrial production much more cost-effective.

The compound, known as gamma-valerolactone (GVL), is attractive because of its versatility, says Yuriy Román, an assistant professor of chemical engineering and leader of the research team. It has more energy than ethanol and could be used on its own or as an additive to other fuels. GVL could also be useful as a “green” solvent or a building block for creating renewable polymers from sustainable materials.

The traditional process for converting plant material to GVL requires catalysts made from precious metals and must be done at very high pressures of hydrogen gas, which makes the process cost-prohibitive. The new MIT production method, described in the June 11 issue of the journal *Angewandte Chemie*, eliminates both of those obstacles.

Source: <http://web.mit.edu/newsoffice/2013/making-alternative-fuels-cheaper-0617.html>

OTHER FUELS AND VEHICLES

John Deere Introduces Flex Fuel Mower



John Deere is expanding its popular line of ZTrak mowers by adding a Flex Fuel model to its fleet. The new, industry exclusive, Z925M Flex Fuel is compatible with ethanol blends up to E85, giving contractors a new alternative fuel option for their fleets. The new Flex Fuel model is part of a Series of commercial mowers. With a 24.6 hp* fuel injected engine, the Z925M Flex Fuel can run on any blend of ethanol-mixed fuel, up to E85, and it has a top speed of 10 mph.

The Z925M Flex Fuel is compatible with ethanol blends up to E85.

Source: http://www.deere.com/wps/dcom/en_US/corporate/our_company/news_and_media/press_releases/2013/residential/2013july2_flex_fuel_ztrack_mower.page

MISCELLANEOUS

Alberta Looks to Become Canada's Biofuel Leader



A Canadian province most well-known for its petroleum products could be that country's leader in non-petroleum energy. According to this article in the Edmonton Journal, Alberta, in all the headlines for its oilsands, could end up leading Canada by replacing half of its transportation fuels with biodiesel and ethanol.

"We now have ethanol from grain and biodiesel from oilseeds, and we can also have ethanol from poplar which is not used in many forestry management areas and we can grow dedicated energy crops," said Bradley Saville, a professor of chemical engineering from the University of Toronto.

He said a recent study determined that by using just five per cent of the arable land in Canada, 29 billion litres of biofuel could be produced.

"And while Alberta is the energy superpower because of its oil production and the oilsands, this scenario sees the province as remaining the superpower in biofuel production because of the large amount of really productive land in the province."

But the trick for Canada is to get "from where we are now, which is a pretty low level, to a higher level. You have to have confidence as an investor, so this process will be incremental over the years," said Saville.

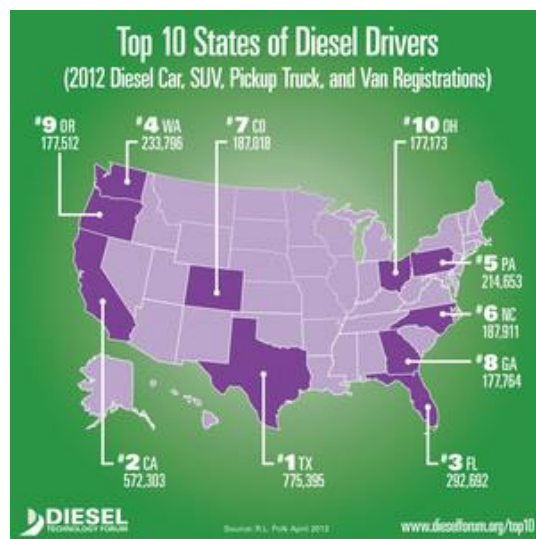
Source: <http://domesticfuel.com/2013/08/19/alberta-looks-to-become-canadas-biofuel-leader/>

Increasing Diesel Car Registration in the US

Clean diesel car registrations increased by 24.3 percent in the U.S. from 2010 through 2012 following similar trends of double-digit diesel car sale increases throughout the country, according to recent data compiled for the Diesel Technology Forum. The national registration information was compiled by R.L. Polk and Co. and includes data for all types of passenger vehicles—cars, SUVs, pickup trucks and vans—in all 50 states and Washington, D.C., from Jan. 1, 2010, through Dec. 31, 2012.

Diesel car and SUV registrations increased from 640,779 in 2010 to 796,794 at the end of 2012, a 24.34 percent increase. During this same period, hybrid car and SUV registrations increased from 1,714,966 to 2,290,903, a 33.58 percent increase. In contrast, the total car and SUV registrations in the U.S. increased by just 2.75 percent during the same period.

Source: <http://www.biodieselmagazine.com/articles/9202/us-diesel-car-registrations-up-nearly-25-percent-2010-undefined12>



Obama Takes Major Action on Climate Change

President Barack Obama rolled out a major plan to combat climate change by reducing greenhouse emissions and using renewable energy.

“Americans across the country are already paying the price of inaction, in insurance premiums, state and local taxes and the costs of rebuilding and disaster relief,” he said, referring to extreme weather events resulting from a warmer climate. “The question now is will we have the courage to act before it’s too late.” He noted that power plants can now legally dump “limitless” amounts of pollution into the air without consequences.

“That’s not right,” he said. “It’s not safe and it needs to stop. Today for the sake of our children and the health and safety of all Americans, I am directing the Environmental Protection Agency to put an end to the limitless dumping of carbon pollution from our power plants and complete new pollution standards for both new and existing power plants.”

Source: www.georgetown.edu/news/obama-old-north-2013.html
Read more: <http://www.whitehouse.gov/share/climate-action-plan>

UK: £25 million for Advanced Biofuel Demonstration Projects

Transport Minister Norman Baker has announced £25 million of capital funding to enable the construction of demonstration-scale waste to fuel and other advanced biofuel plants in the UK. The money will be used to underpin significant private sector investment in one or more demonstration-scale advanced biofuel plants in order to drive the development of the UK’s biofuel industry.

According to Transport Minister Norman Baker it is clear that in the long term advanced biofuels will be important in areas that we cannot otherwise decarbonize, such as aviation. Energy and Climate Change Secretary Edward Davey added: “advanced biofuels have the potential to make a sustainable contribution to our 2020 renewable energy targets, as well as to our longer term decarbonization targets”.

There is significant potential for growth in biofuel use, in low carbon vehicles and other sectors, if

advanced technologies are harnessed. This funding will give the industry the boost it needs to develop this innovative, low carbon market. The funding will be provided over three years from 2015 following a competition to identify the best and most suitable industry proposals.

The Department for Transport will commission a feasibility study to report on the detailed design of the proposed competition including eligibility criteria and funding scheme options, as well as ensuring the project complies with EU State aid rules.

Further details on the competition, including the feasibility study, will be provided in the autumn alongside a range of potential measures to support the most sustainable fuels and spur further innovation in this sector.

Source: <https://www.gov.uk/government/news/25-million-for-advanced-biofuel-demonstration-projects>

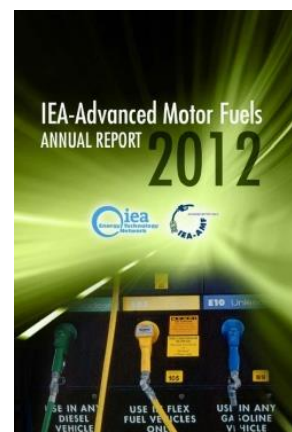
IEA & IEA-AMF News

AMF IA

The Advanced Motor Fuels Implementing Agreement (AMF IA) is driving on a successful path towards cleaner and more efficient transport. Established in 1984, in its 30th year of existence the Implementing Agreement has grown to a number of 17 Contracting Parties which currently participate in 12 Annexes. Over the years, 35 Annexes have been successfully completed, and more than 50 reports have been published. The AMF Annual Report 2012, which is available through the website, provides the full picture of country updates and reports on annex work.

The vision of AMF is to contribute to sustainable solutions through its system view of the entire fuel chain from resource development to end-use. AMF's cooperative research in the field of transport fuels helps to facilitate the widespread use of sustainable fuels of high quality.

The objectives of AMF are to act as a clearing-house on advanced motor fuels information, to provide an RD&D network, and to contribute to the identification of technical and economic barriers by providing solid data to decision makers.



AMF Executive Committee

The 46th ExCo meeting is scheduled for 18-21 November 2013 in Chile and will include a seminar on "Cleaner and More Efficient Public Transport", a topic of special interest in Latin America. The meeting will also serve to rework the AMF Strategic Plan, a requirement for the extension of the Agreement after 2015.

AMF Annexes / Projects

Annex 28: Information Service & AMF Website

Annex 35 Subtask 2: Particulate Measurements: Ethanol and Butanol in DISI Engines

Annex 38 Phase 2: Environmental Impact of Biodiesel Vehicles

Annex 39 Phase 2: Enhanced Emission Performance of HD Methane Engines

Annex 42: Toxicity of Exhaust Gases and Particles from IC-Engines

Annex 43: Performance Evaluation of Passenger Car, Fuel, and Powerplant Options

Annex 44: Alcohol fuels including methanol, by CATARC, China

Annex 45: Hydrotreated vegetable oil, by Germany and Denmark

Annex 46: Alcohol Application in CI Engines, by DTU

Annex 47: Reconsideration of DME Fuel Specifications for Vehicles **(NEW!)**

Annex 48: Value Proposition Study on Natural Gas Pathways for Road Vehicles **(NEW!)**

Annex 49: COMVEC – Fuel and Technology Alternatives for Commercial Vehicles **(NEW!)**

Check www.iea-amf.org for more details!

PUBLICATIONS

- **Jatropha mahafalensis oil from Madagascar: Properties and suitability as liquid biofuel** – In this research article Jatropha mahafalensis oil quality was analysed for the first time. It was proven that the oil is technically suitable as liquid biofuel in stationary engines with processing steps to improve the quality.

Link: <http://www.sciencedirect.com/science/article/pii/S0973082613000318>

- **Bioenergy in Africa: The Jatropha plant's risk and potential** – Within the ERA-ARD project “Bioenergy in Africa: Opportunities and Risks of Jatropha and Related Crops” 5 Policy Briefs were created which publish the results of the project: 1 – Jatropha growth and oilseed production in Africa, 2 – Can jatropha curcas contribute to climate change mitigation?, 3 – Can jatropha improve the energy supply of rural households in Africa?, 4 – Are jatropha and other biofuels profitable in Africa?, 5 – Biofuels: Possible impacts on food security in Kenya.

Link: <https://www.cde.unibe.ch/Pages/Bioenergy-in-Africa.aspx>

Website: <http://www.bioenergyinafrica.net/home.html>

- **Unintended Consequences of Renewable Energy - Problems to be Solved for Future.** The book presents results from cross-disciplinary research on implementation of the alternative fuels hydrogen, electricity and biodiesel in the transport sector, as well as the assessment of environmental impacts from the production of solar cells. A key focus is on the impacts of the use of nanotechnology and nanomaterials in energy technologies.

Link: <http://www.springer.com/energy/renewable+and+green+energy/book/978-1-4471-5531-7>

- **Nitrogen flows in Switzerland in 2020** - This report quantifies nitrogen flows in Switzerland for the year 2020 and compares them with 2005 and in some instances with 1994. For example, NO_x emissions decrease significantly from 2005 to 2020, but emissions of ammonia and nitrous oxide drop only a little, and the net import of foodstuffs and feed increases. Contingency analysis is used to predict how planned or agreed changes in energy, climate, clean air and agricultural policies will affect nitrogen flows. (Abstract in English, full version in German).

Link: http://www.bafu.admin.ch/publikationen/publikation/01713/index.html?lang=de&show_kat=/publikationen/00016

- **World Energy Outlook Special Report 2013: Redrawing the Energy Climate Map** - The World Energy Outlook has published detailed analysis of the energy contribution to climate change for many years. But, amid major international economic preoccupations, there are worrying signs that the issue of climate change has slipped down the policy

agenda. This Special Report seeks to bring it right back on top by showing that the dilemma can be tackled at no net economic cost.

Link: <http://www.iea.org/publications/freepublications/publication/name,38764,en.html>

- **EU bioenergy potential from a resource efficiency perspective** - The main objective of this report is to review the implications of resource efficiency principles for developing EU bioenergy production. The results presented are primarily based on the 2013 ETC/SIA study, capturing key messages while excluding some of the more technical elements. The report aims to be a more accessible version of the ETC/SIA study, aimed at the non-technical reader.

Link: <http://www.eea.europa.eu/publications/eu-bioenergy-potential>

- **EU emission inventory report 1990-2011 under the UNECE Convention on LRTAP** - This document is the annual European Union (EU) emission inventory report under the United Nations Economic Commission for Europe (UNECE) Convention on Long-range Transboundary Air Pollution (LRTAP) (UNECE, 1979). The report and its accompanying data are provided as an official submission to the Executive Secretary of UNECE by the European Commission on behalf of the EU as a party. The report is compiled by the European Environment Agency (EEA) in cooperation with the EU Member States.

Link: <http://www.eea.europa.eu/publications/eu-emission-inventory-report-lrtap>

- **A Roadmap to Responsible Soy: approaches to increase certification and reduce risk** - Soy is one of the world's most important and profitable agricultural commodities. But it is also controversial because its production is associated with significant environmental and social problems including deforestation and poor working conditions. The production of soy is soaring as global population growth and increasing wealth in the developing world drive demand. But as production grows, so do the industry's environmental and social impacts. A Roadmap to Responsible Soy is published in collaboration with the Sustainable Trade Initiative (IDH), WWF, FMO (the Netherlands Development Finance Company) and the International Finance Corporation (IFC).

Link: <http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/sustainable-insight/Pages/roadmap-responsible-soy.aspx>

- **Shifting away from conventional biofuels** - An important debate is underway about the future of biofuels in Europe and the UK specifically, triggered by the realization that current biofuel consumption has greater environmental and social impacts than first anticipated. The UK has ample potential to use wastes and residues for advanced biofuels and create jobs in this emerging industry – but safeguards are key to ensure this is done in an environmentally sustainable way.

Link:

http://www.ieep.eu/assets/1192/IEEP_May_2013__Shifting_away_from_conventional_biofuels_in_the_UK.pdf

- **Utilisation of the internal engine potential of biodiesel (FAME) with consideration for specific fuel characteristics in the common rail diesel engine** - Biodiesel offers great internal engine potential for reducing particulate emissions - Brief study on behalf of UFOP demonstrates ways of significantly reducing particulate emissions

Link: <http://www.ufop.de/english/news/biodiesel-offers-great-internal-engine-potential-for-reducing-particulate-emissions/>

- **World Meteorological Organization: The global climate 2001 – 2010. A decade of climate extremes** - The first decade of the 21st century was the warmest decade recorded since modern measurements began around 1850. It saw above-average precipitation, including one year – 2010 – that broke all previous records. It was also

marked by dramatic climate and weather extremes such as the European heatwave of 2003, the 2010 floods in Pakistan, hurricane Katrina in the United States of America (USA), cyclone Nargis in Myanmar and long-term droughts in the Amazon Basin, Australia and East Africa.

Link: http://library.wmo.int/pmb_ged/wmo_1119_en.pdf

- **Renewables Information 2013** - Renewables Information provides a comprehensive review of historical and current market trends in OECD countries, including 2012 preliminary data. An Introduction, notes, definitions and auxiliary information are provided in Part I. Part II of the publication provides an overview of the development of renewables and waste in the world over the 1990 to 2011 period. A greater focus is given to the OECD countries with a review of electricity generation and capacity from renewable and waste energy sources. Part III of the publication provides a corresponding statistical overview of developments in the world and OECD renewable and waste market.

Link: http://www.oecd-ilibrary.org/energy/renewables-information-2013_renew-2013-en

- **Oil Information 2013** - Oil Information is a comprehensive annual reference book on current developments in oil supply and demand. The first part of this publication contains key data on world production, trade, prices and consumption of major oil product groups, with time series back to the early 1970s. The second part gives a more detailed and comprehensive picture of oil supply, demand, trade, production and consumption by end-user for each OECD country individually and for the OECD regions. Trade data are reported extensively by origin and destination.

Link: <http://www.oecdbookshop.org/oecd/display.asp?sf1=identifiers&st1=9789264203136&LANG=EN>

- **Greening Household Behaviour - OECD Studies on Environmental Policy and Household Behaviour.** This publication presents a data overview of the most recent round of the survey implemented in five areas (energy, food, transport, waste, and water) and 11 countries: Australia, Canada, Chile, France, Israel, Japan, Korea, the Netherlands, Spain, Sweden and Switzerland.

Link: http://www.oecd-ilibrary.org/environment/greening-household-behaviour_9789264181373-en

- **Energy Balances of OECD Countries 2013** - This volume contains data on the supply and consumption of coal, oil, gas, electricity, heat, renewables and waste presented as comprehensive energy balances expressed in million tonnes of oil equivalent. Complete data are available for 2010 and 2011 and supply estimates are available for the most recent year (i.e.2012). Historical tables summarise production, trade and final consumption data as well as key energy and economic indicators. The book also includes definitions of products and flows, explanatory notes on the individual country data and conversion factors from original units to energy units.

Link: http://www.oecd-ilibrary.org/energy/energy-balances-of-oecd-countries-2013_energy_bal_oecd-2013-en

- **Energy Statistics of OECD Countries 2013** - This volume contains data on energy supply and consumption in original units for coal, oil, gas, electricity, heat, renewables and waste. Complete data are available for 2010 and 2011 and supply estimates are available for the most recent year (i.e. 2012). Historical tables summarise data on production, trade and final consumption. The book also includes definitions of products and flows and explanatory notes on the individual country data. In the 2013 edition of Energy Balances of OECD Countries, the sister volume of this publication, the data are presented as comprehensive energy balances expressed in million tonnes of oil equivalent.

Link: http://www.oecd-ilibrary.org/energy/energy-statistics-of-oecd-countries-2013_energy_stats_oecd-2013-en

- **The LNG Carrier Market 2013-2023** - Visiongain consulted widely with industry experts and full transcripts exclusive interviews are included in the report. As such, the report has a unique blend of primary and secondary sources providing informed opinion. The report provides insight into key drivers and restraints behind the LNG carrier industry, identifying past failures, future growth areas and analyses leading companies. The report also provides a unique blend of qualitative analysis combined with extensive quantitative data including global, submarket and national markets forecasts from 2013-2023 - all highlighting key business opportunities.

Link: <http://www.visiongain.com/Report/960/The-LNG-Carrier-Market-2013-2023>

EVENTS

European Transport Conference 2013, 30 September - 2 October 2013, Frankfurt, Germany

Conference website: <http://etcproceedings.org/>

AVTECH'13 - International Conference on Automotive and Vehicle Technologies 2013, 2-4 October 2013, Istanbul, Turkey

Conference website: <http://www.avtechconference.org/>

Sustainable Transport 2013, 3 October 2013, London, UK

Conference website: <http://www.greeningtransport.co.uk/event-home>

Eco-Mobility 2013, 3-4 October 2013, Vienna, Austria

Conference website: www.a3ps.at

13th International Symposium on Solid Oxide Fuel Cells (SOFC-XIII), 6-11 October 2013, Okinawa, Japan

Conference website: <http://www.sofc-xiii.com/>

20th ITS World Congress, 14-18 October 2013, Tokyo, Japan

Conference website: <http://www.itsworldcongress.jp/>

Clean Power for Transport Conference, 21 October 2013, Brussels, Belgium

Conference website: http://ec.europa.eu/transport/themes/urban/events/2013-10-21-cpt-conference_en.htm

2013 Fuel Cell Seminar & Energy Exposition, 21 October 2013, Columbus, Ohio, USA

Conference website: <http://www.fuelcellseminar.com/>

8th Conference on Gaseous Fuel Powered Vehicles, 22-23 October 2013, Stuttgart, Germany

Conference website: <http://www.iav.com/termine/iav-tagung/8-tagung-gasfahrzeuge-antrieb-mit-zukunft?r=en&n=10776>

engine expo 2013, 22-24 October 2013, Detroit, Michigan, USA

Conference website: <http://www.engine-expo.com/usa/>

Plugging the Sustainability Gap: Boosting the European Electric Vehicle Market, 29 October 2013, Brussels, Belgium

Conference website: <http://www.publicpolicyexchange.co.uk/events/DJ29-PPE2>

2013 Hydrogen & Fuel Cells Energy Summit, 30-31 October 2013, Berlin, Germany

Conference website: <http://www.wplgroup.com/aci/conferences/eu-ehf1.asp>

4th Hybrid and Electric Vehicles Conference 2013, 6-7 November 2013, London, UK

Conference website: <http://conferences.theiet.org/hevc/>

Bloomberg Fuel Choices Summit, 12-13 November 2013, Tel Aviv, Israel

Conference website: <http://www.bloomberglink.com/event/fuelchoices/>

Renewable Energy World Conference & Expo North America, 12-14 November 2013, Orlando, Florida, USA

Conference website: <http://www.renewableenergyworld-events.com/index.html>

Advanced Energy Technology Congress, 12-15 November 2013, San Diego CA, USA

Conference website: <http://www.knowledgefoundation.com/indexkf.php>

8th Asian DME Conference, 13-14 November 2013, Jakarta, Indonesia

Conference website: <http://ptpse.bppt.go.id/index.php/en/general-information>

Symposium on Methanol Challenges and Opportunities, 14 November 2013, Tel Aviv, Israel

International Electric Vehicle Symposium & Exhibition (EVS27), 17-20 November 2013, Barcelona, Spain

Conference website: <http://www.evs27.org/>

New Energy Vehicle Show, 27-29 November 2013, Hong Kong, China

Conference website: <http://www.nev-hk.com/>

Canadian Renewable Fuels Summit 2013, 2-4 December, Montreal, Quebec, Canada

Conference website: <http://www.greenfuels.org/en/industry-information/summit.aspx>

Fuels of the Future 2014, 20-21 January 2014, Berlin, Germany

Conference website: <http://www.fuels-of-the-future.com/>

National Ethanol Conference, 17-19 February 2014, Orlando, Florida, USA

Conference website: <http://www.nationalethanolconference.com/>

31st International Battery Seminar & Exhibit, 10-13 March 2014, Fort Lauderdale, Florida, USA

Conference website: <http://www.powersources.net/florida/31st.html>

European Hydrogen Energy Conference (EHEC 2014), 12-14 March 2014, Sevilla, Spain

Conference website: <http://www.ehec.info/>

5th Transport Research Arena (TRA) 2014 conference, 14-17 April 2014, Paris-la-Defense, France

Conference website: <http://www.traconference.eu/>

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CanmetENERGY, Niklas Ekstrom

People's Republic of China

CATARC, Maodong Fang

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DTU, Jesper Schramm

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